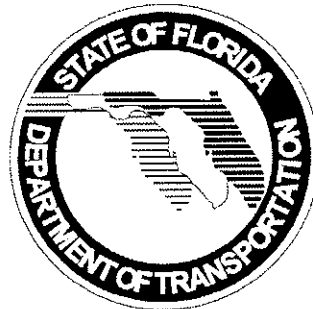


Interstate 275 (I-275) Systems Interchange Modification Report (SIMR)

WPI Segment No. 258435-1
State Project No. 10190-1413
FAP No. NH-275-7(333)36

Hillsborough County

**Prepared for
Florida Department of Transportation
District Seven**



FEBRUARY 2001

FLORIDA DEPARTMENT OF TRANSPORTATION
SYSTEMS INTERCHANGE MODIFICATION PROPOSAL
REVIEW CHECKLIST AND CERTIFICATION STATEMENT

Location: I-275 from the East End of the Howard Frankland Bridge to the Hillsborough River

Interchanges: Kennedy Boulevard, Memorial Highway, Westshore Boulevard, Lois Avenue, Dale Mabry Highway, Himes Avenue, Howard/Armenia Avenue and Ashley Street

DOT District: Seven

Applicant: FDOT District Seven, Environmental Management Office

Contact: Mr. Kirk Bogen, P.E., District Project Development Engineer

EXCEPTIONS (POLICY, PROCEDURE, STANDARDS):

CERTIFICATION:

This document has been reviewed to ensure consistency with Federal and Department Policies, Procedures and Standards (except as noted above). The document is complete and consistent with the factors, analysis techniques and documentation requirements as agreed to in the Methodology Letter of Understanding

District Planning Manager

Date

Project Manager

Date

District Secretary or Designee

Date

TABLE OF CONTENTS

	<u>Page</u>
List of Tables.....	ii
List of Exhibits.....	iii
Executive Summary	v

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION.....	1
1.1 Purpose of Study	1
1.2 Project Limits and Study Area	1
2.0 EXISTING CONDITIONS	4
2.1 Existing Laneage	4
2.2 Existing Traffic Volumes	5
2.3 Existing Traffic Operations	6
2.4 Existing Crash History	21
2.5 Existing Geometrics	24
2.6 Summary	33
3.0 FUTURE YEAR TRAFFIC PROJECTIONS.....	34
3.1 Project Model Validation	34
3.2 Travel Demand Forecasting Methodology.....	42
3.3 Development of Design Hour Volumes	52
3.4 Summary	56
4.0 FUTURE YEAR CONDITIONS	57
4.1 Recommended Improvement Concept	57
4.2 Future Year Traffic Analysis.....	64
4.3 Summary	72
5.0 SUMMARY	73

APPENDICES

Appendix A – 2010 HCS Analyses
Appendix B – 2015 HCS Analyses
Appendix C – 2025 HCS Analyses

LIST OF TABLES

<u>Table No.</u>	<u>Title</u>	<u>Page</u>
1	Existing Peak Hour Mainline Travel Speeds	7
2	Existing Peak Hour Signalized Intersection Operations	15
3	Mainline Crash Data Summary (1993-1997)	22
4	Average Crash Densities	23
5	Existing Mainline Vertical Curves	26
6	Existing Horizontal Stopping Sight Distance.....	27
7	Existing Mainline Shoulder Widths	28
8	Existing Bridge Shoulder Widths.....	29
9	Existing Ramp Shoulder Widths	30
10	Existing Ramp Lengths	31
11	Existing Ramp Terminals.....	32
12	1995 Mainline Volume Comparison Original TBRPM Validation Volumes vs. Actual Volumes	35
13	1995/1996 Ramp Volume Comparison Original TBRPM Validation Volumes vs. Actual Volumes	36
14	1995 Mainline Volume Comparison Revised TBRPM Validation Volumes vs. Actual Volumes	39
15	1995/1996 Ramp Volume Comparison Revised TBRPM Validation Volumes vs. Actual Volumes	40
16	Year 2025 North/South Screenline Volume Comparison	44
17	Year 2025 North/South Screenline Volume Distribution No-Build Alternative	45
18	Year 2025 North/South Screenline Volume Distribution Stage 1, 2, and 3 Improvements	46
19	Year 2025 East/West Screenline Volume Comparison.....	48
20	Year 2025 East/West Screenline Volume Distribution No-Build Alternative	49
21	Year 2025 East/West Screenline Volume Distribution Stage 1, 2, and 3 Improvements	50
22	I-275 Mainline Volume Growth Rate Comparison.....	53
23	Recent I-275 Mainline Volume Growth Rates (1995-1998).....	54
24	I-275 On-/Off-Ramp Volume Growth Rate Comparison.....	55
25	Proposed Mainline Vertical Curves	61
26	Proposed Horizontal Stopping Sight Distance	62
27	Year 2015 A.M. Peak Hour CORSIM Model Speeds and Densities for I-275 Mainline	68
28	Year 2015 P.M. Peak Hour CORSIM Model Speeds and Densities for I-275 Mainline	69
29	Average I-275 Corridor Travel Speed Comparison	71

LIST OF EXHIBITS

Exhibit No.

1	Project Location Map and Area of Influence
2	Existing I-275 Lane Line Diagram
3	Westshore Boulevard Existing Intersection Geometry
4	Lois Avenue Existing Intersection Geometry
5	Dale Mabry Highway Existing Intersection Geometry
6	Himes Avenue Existing Intersection Geometry
7	Armenia/Howard Avenue Existing Intersection Geometry
8A & 8B	Existing (1998) Average Annual Daily Traffic Volumes
9A & 9B	Existing (1998) I-275 Peak Hour Volumes
10	Existing (1998) Peak Hour Volumes I-275 at Westshore Boulevard
11	Existing (1998) Peak Hour Volumes I-275 at Lois Avenue
12	Existing (1998) Peak Hour Volumes I-275 at Dale Mabry Highway
13	Existing (1998) Peak Hour Volumes I-275 at Himes Avenue
14	Existing (1998) Peak Hour Volumes I-275 at Armenia/Howard Avenue
15	A.M. Peak Hour Travel Speed Comparison - Eastbound I-275
16	A.M. Peak Hour Travel Speed Comparison - Westbound I-275
17	P.M. Peak Hour Travel Speed Comparison - Eastbound I-275
18	P.M. Peak Hour Travel Speed Comparison - Westbound I-275
19	A.M. Peak Hour Queue Length - Westbound I-275 Off-Ramp to Lois Avenue
20	A.M. Peak Hour Queue Length - Westbound I-275 Off-Ramp to Westshore Boulevard
21	Existing (1998) I-275 Mainline Densities and Levels of Service - A.M. Peak Hour
22	Existing (1998) I-275 Mainline Densities and Levels of Service - P.M. Peak Hour
23	Existing (1998) Volume-to-Capacity Ratios
24-33	Existing Geometric Deficiencies
34	Year 2025 Average Annual Daily Traffic Volumes - No-Build Alternative
35	Year 2025 Average Annual Daily Traffic Volumes - Stage 1, 2, and 3 Improvements
36	Year 2015 Average Annual Daily Traffic Volumes - No-Build Alternative
37	Year 2015 Average Annual Daily Traffic Volumes - Stage 1, 2, and 3 Improvements
38	Year 2010 Average Annual Daily Traffic Volumes - No-Build Alternative
39	Year 2010 Average Annual Daily Traffic Volumes - Stage 1, 2, and 3 Improvements
40	Year 2025 Directional Design Hour Volumes - No Build Alternative
41	Year 2025 Directional Design Hour Volumes - Stage 1, 2, and 3 Improvements
42	Year 2015 Directional Design Hour Volumes - No-Build Alternative
43	Year 2015 Directional Design Hour Volumes - Stage 1, 2, and 3 Improvements

LIST OF EXHIBITS (Continued)

Exhibit No.

44	Year 2010 Directional Design Hour Volumes - No-Build Alternative
45	Year 2010 Directional Design Hour Volumes - Stage 1, 2, and 3 Improvements
46-55	Recommended Improvement Concept
56	Year 2010 Volume-to-Capacity Ratios – No-Build Alternative
57	Year 2010 Volume-to-Capacity Ratios – Build Alternative
58	Year 2015 Volume-to-Capacity Ratios – No-Build Alternative
59	Year 2015 Volume-to-Capacity Ratios – Build Alternative
60	Year 2025 Volume-to-Capacity Ratios – No-Build Alternative
61	Year 2025 Volume-to-Capacity Ratios – Build Alternative
62	Year 2015 Design Hour Volumes – I-275/Westshore Boulevard
63	Year 2015 Design Hour Volumes – I-275/Lois Avenue/Cypress Street
64	Year 2015 Design Hour Volumes – I-275/Dale Mabry Highway
65	Year 2015 Design Hour Volumes – I-275/Himes Avenue
66	Year 2015 Design Hour Volumes – I-275/Armenia Avenue/Howard Avenue
67	Year 2015 I-275 Mainline Densities and Levels of Service Build Alternative- A.M. Peak Hour
68	Year 2015 I-275 Mainline Densities and Levels of Service Build Alternative- P.M. Peak Hour

EXECUTIVE SUMMARY

The Final Environmental Impact Statement (FEIS) prepared for the Tampa Interstate Study (TIS) and approved by the Federal Highway Administration (FHWA) in December 1996 documents the need for multi-lane improvements on I-275 from the east end of the Howard Frankland Bridge to Dr. Martin Luther King, Jr. Boulevard and on I-4 from I-275 to 50th Street. The ultimate improvements for the I-275 corridor consist of a four-roadway system with a local freeway on the outside and an express freeway on the inside. The improvements documented in the FEIS also include modifications to the existing interchanges along I-275. These modifications are needed to improve the geometrics of the existing interchanges (e.g., ramp acceleration/deceleration lane lengths, vertical profiles, etc.) as well as to improve the traffic operations on mainline I-275.

The Florida Department of Transportation (FDOT) District Seven is planning geometric modifications for I-275 in Hillsborough County. The need for improvements to I-275 has been endorsed by the Hillsborough County Metropolitan Planning Organization (MPO) and the improvements evaluated in this Systems Interchange Modification Report (SIMR) are currently included in the MPO's adopted Year 2020 Financially Feasible Long Range Transportation Plan and in the FDOT's Year 2020 Florida Intrastate Highway System (FIHS) Financially Feasible Plan. The proposed improvements that are documented in this SIMR constitute the financially feasible portion of the ultimate improvements and are contained within the proposed right-of-way footprint documented in the approved FEIS. Consequently, the proposed improvements for this SIMR are consistent with the FEIS. The proposed improvements are also consistent with the Hillsborough County and City of Tampa's Comprehensive Plans.

Currently, the portion of I-275 in Hillsborough County from the Howard Frankland Bridge to the Ashley Street interchange is experiencing high levels of congestion in both travel directions during both the a.m. and p.m. peak hours. These high levels of congestion result in average overall peak hour freeway travel speeds that, based on actual field observations, currently range between 27.8 miles/hour and 34.1 miles/hour. Detailed microscopic simulation of the I-275 corridor using the CORSIM model indicates that a majority of the corridor is experiencing peak period vehicle densities that are representative of Level of Service E or F operating conditions. The historic crash data for this study corridor indicates that almost 1,600 crashes have occurred over this 6.45-mile segment of I-275 in a five-year period, which have resulted in a total economic loss of approximately \$133 million. The large numbers of crashes that have occurred are due to both the lack of adequate capacity on I-275 as well as the existing geometric deficiencies (both mainline and interchange ramps) present within the study corridor. Consequently, there exists a need for improvements on I-275.

Future year daily and design hour traffic projections were developed for the I-275 SIMR using the FDOT District Seven Tampa Bay Regional Planning Model (TBRPM). The previously validated base year (1995) TBRPM was modified to better replicate the base year travel demand in the I-275 study corridor. Using this modified base year model validation; future year networks were coded for I-275 and future year Peak Season Weekday Average Daily Traffic (PSWADT) volumes were obtained for the No-Build Alternative and the planned Interstate improvements. The PSWADT volume projections obtained from the TBRPM model applications were reviewed for reasonableness

and subsequently converted to Average Annual Daily Traffic (AADT) volumes. Directional design hour volumes were then derived by multiplying the AADT volumes by K_{30} - and D_{30} -factors.

Future year traffic analyses were conducted for both the No-Build Alternative (i.e., the existing I-275 laneage) and the Build Alternative (i.e., the proposed Interstate improvements) using the Highway Capacity Manual Software (HCS). The HCS analyses were conducted for the years 2010, 2015, and 2025. Although the future year peak hour volumes on I-275 are projected to exceed the capacity provided by the proposed improvements, a comparison between the Build and No-Build Alternatives indicates a substantial improvement in the future year volume-to-capacity (v/c) ratios with the proposed improvements. By the year 2015, almost all of the existing I-275 study corridor is projected to operate with v/c ratios ranging between 1.30 and 1.63. By the year 2025, a majority of the existing I-275 study corridor is projected to operate with v/c ratios ranging between 1.34 and 1.69. With the implementation of the proposed improvements, a majority of the I-275 study corridor is projected to operate with v/c ratios ranging between 1.00 and 1.13 in 2015 and between 1.03 and 1.17 in 2025. In addition, a comparison of the existing v/c ratios with the projected 2025 v/c ratios for the Build Alternative indicates that even though a majority of the I-275 corridor is projected to operate over capacity with the proposed improvements, a portion of the corridor is projected to operate with lower v/c ratios than what currently exists today if the improvements are constructed.

An additional analysis of the proposed improvements was conducted using the CORSIM model that was previously calibrated during the existing conditions analysis portion of this study. Due to the high v/c ratios projected to occur on I-275 in the year 2025, the CORSIM analysis was conducted for the year 2015.

The results of the initial simulations indicated that the adjacent cross street intersections at Westshore Boulevard and Cypress Street, Lois Avenue and Cypress Street, and Dale Mabry Highway and Cypress Street were all operating over capacity and were experiencing severe queuing conditions that impacted the I-275 ramp terminal intersections, which blocked the flow of traffic from the off-ramps onto the arterial street network. This in turn, caused the off-ramp queues to extend back onto the I-275 mainline and reduce the flow of traffic on the mainline. Consequently, the lack of adequate capacity on Cypress Street was prohibiting the simulation model from being able to demonstrate the operational benefits that would be expected to occur specifically due to the implementation of the I-275 improvements.

Based on these results, a second simulation analysis was conducted. The second simulation analysis was conducted in an incremental manner to determine the amount of additional peak hour traffic volume that could be accommodated with the proposed improvements prior to the point where the surface street intersection capacity constraints begin to impact the Interstate system. The 2015 a.m. and p.m. peak hour volumes were decreased and the CORSIM model was re-run in an iterative manner until the simulation indicated that the queues at the adjacent local street intersections had begun to impact the off-ramp operations. With this approach, the CORSIM model was able to demonstrate the operational benefits that would be expected to occur on the I-275 mainline and the off-ramps with the implementation of the recommended improvements.

The results of the incremental simulation analysis indicate that approximately 80.0 percent of the 2015 a.m. peak hour volumes and 85.0 percent of the 2015 p.m. peak hour volumes can be accommodated without any significant negative impact occurring on the I-275 mainline as a result

of adjacent cross street intersection queuing problems. Two compact discs (CDs) containing the a.m. and p.m. peak hour CORSIM files for the simulations conducted at the 80.0 percent and 85.0 percent levels are included in this report. Since CORSIM is a stochastic model that randomly assigns vehicles to the roadway network prior to the beginning of the simulation time period, CORSIM was run multiple times using different initial network “loadings” and the model output data was averaged to eliminate the potential for obtaining skewed or biased results.

The simulation analysis indicates that the I-275 improvements are projected to result in a significant increase in peak hour travel speeds and levels of service for both travel directions. The existing average peak hour travel speeds along the I-275 corridor range from 27.8 miles/hour to 34.1 miles/hour while the 2015 average peak hour travel speeds are projected to range from 45.1 miles/hour to 53.2 miles/hour. In the a.m. peak hour, the portion of westbound I-275 between the Armenia Avenue on-ramp and the Lois Avenue on-ramp that is currently operating at level of Service F is projected to operate at Level of Service E or better in the year 2015. In addition, the portion of westbound I-275 between the Armenia Avenue on-ramp and the Dale Mabry Highway off-ramp and the portion of westbound I-275 between the Dale Mabry Highway on-ramp and the Westshore Boulevard/Trask Street off-ramp is projected to operate at Level of Service D. The portions of eastbound I-275 between the Lois Avenue on-ramp and the Dale Mabry Highway on-ramp and between the Himes Avenue on-ramp and the Ashley Street/Scott Street off-ramp that are currently operating at Level of Service F in the a.m. peak hour are also projected to operate at Level of Service E or better in 2015 with the proposed improvements. In the p.m. peak hour, the portion of westbound I-275 between the Armenia Avenue on-ramp and the Kennedy Boulevard on-ramp that is currently operating at Level of Service F is projected to operate at Level of Service E or better in the year 2015 with the proposed improvements.

Although the simulation results documented in this SIMR do not represent the I-275 mainline operations that would be expected to occur during the 30th highest hour in the Year 2015 (since the simulations were conducted using 80.0 percent and 85.0 percent of the 2015 design hour volumes), it should be noted that the “constraint” on the 2015 simulations is not the capacity on mainline I-275 but rather the capacity at the adjacent cross street intersections. In addition, it should be noted that the 2015 peak hour volumes included in the final simulations are significantly higher than the existing a.m. and p.m. peak hour volumes. The volumes included in the 2015 a.m. peak hour simulation between Memorial Highway and Ashley Street are on average approximately 46.5 percent higher than the existing a.m. peak hour volumes. The volumes included in the 2015 p.m. peak hour simulation between Memorial Highway and Ashley Street are on average approximately 65.0 percent higher than the existing p.m. peak hour volumes.

The results of the traffic analysis conducted for this SIMR indicate that the recommended improvements are expected to provide improved traffic operations throughout the I-275 corridor commensurate with the magnitude of the future year volumes projected to travel on I-275. Although a majority of the corridor is projected to operate with v/c ratios greater than 1.00 by the year 2015 with the proposed improvements, these improvements constitute the financially feasible portion of the ultimate improvements documented previously in the FHWA approved FEIS. The additional capacity that will be needed to accommodate the future year travel demand will be provided via the implementation of the express freeway component of the ultimate Tampa Interstate Study

improvements. Based on the current FDOT District Seven funding plan, the implementation of this express freeway system is not anticipated to occur until after the Year 2020.

The proposed improvements are projected to improve the existing mainline densities, travel speeds, and levels of service throughout a majority of the I-275 study corridor while at the same time accommodating a significant increase in mainline peak hour traffic volumes. The provision of braided on- and off-ramps (physically separated via structures) between Westshore Boulevard, Lois Avenue, and Dale Mabry Highway will preclude “one interchange trips” (i.e., vehicles entering I-275 from one interchange and exiting I-275 at the next interchange) from being made on I-275 in this area. This reduction in local trips on I-275 is expected to provide a benefit for the longer distance travel on I-275. The provision of braided on- and off-ramps also allows longer ramps to be provided in this area than could otherwise be provided due to the close spacing of the interchanges. The longer on-ramps will allow vehicles more time to accelerate to the speed needed to merge with the mainline vehicles while the longer off-ramps will allow vehicles to safely decelerate from the mainline travel speed to a stopped condition on the ramp itself and minimize the possibility of off-ramp queues extending back onto the mainline. Lastly, the braided ramps will reduce the turbulence in the outside travel lanes since the volumes in the outside lanes upstream of the on-ramp gore areas are lower due to the off-ramp traffic exiting the mainline prior to the on-ramp traffic entering the mainline.

The provision of auxiliary lanes between the Westshore Boulevard interchange and the Dale Mabry Highway interchange as well as between the Dale Mabry Highway interchange and the Armenia Avenue/Howard Avenue interchange are also expected to improve the operations on mainline I-275 since the vehicles entering and exiting I-275 at these ramps will have additional distance (and hence, time) to merge/diverge with the mainline through vehicles. The implementation of auxiliary lanes will also reduce the turbulence that would otherwise occur in the outside through lanes on I-275.

The improved geometrics associated with the reconstructed mainline I-275 are also expected to reduce the potential for future accidents to occur. All of the proposed crest and sag vertical curves are expected to exceed the FDOT Plans Preparation Manual (PPM) minimum requirements and a majority of the vertical curves will significantly exceed the minimum requirements. In addition, all of the bridge and ramp shoulder widths will be designed to meet the FDOT PPM requirements. Although the true impact of geometric deficiencies on traffic operations cannot be easily quantified, the existing I-275 geometrics do have a negative impact on the flow of traffic along this corridor. Given the significant improvements that are proposed for the geometric design elements associated with both the I-275 mainline and the interchange on- and off-ramps (i.e., horizontal and vertical alignment, shoulder widths, ramp lengths, ramp tapers), it is expected that the flow of traffic along the I-275 corridor and the safety of the traveling public will be greatly improved.

Section 1.0

INTRODUCTION

The Final Environmental Impact Statement (FEIS) prepared for the Tampa Interstate Study (TIS) and approved by the Federal Highway Administration (FHWA) documents the need for multi-lane improvements on I-275 from the east end of the Howard Frankland Bridge to Dr. Martin Luther King, Jr. Boulevard and on I-4 from I-275 to 50th Street. The ultimate improvements for the I-275 corridor consist of a four-roadway system with a local freeway on the outside and an express freeway on the inside. The improvements documented in the FEIS also include modifications to the existing interchanges along I-275. These modifications are needed to improve the geometrics of the existing interchanges (e.g., ramp acceleration/deceleration lane lengths, vertical profiles, etc.) as well as to improve the traffic operations on mainline I-275.

The Florida Department of Transportation (FDOT) District Seven is planning geometric modifications for I-275 in Hillsborough County. The need for improvements to I-275 has been endorsed by the Hillsborough County Metropolitan Planning Organization (MPO) and the improvements to be evaluated in this Systems Interchange Modification Report (SIMR) are currently included in the MPO's adopted Year 2020 Financially Feasible Long Range Transportation Plan and in the FDOT's Year 2020 Florida Intrastate Highway System (FIHS) Financially Feasible Plan. The proposed improvements that will be analyzed in this SIMR constitute a portion of the ultimate improvements and are contained within the proposed right-of-way footprint documented in the approved FEIS. Consequently, the proposed improvements for this SIMR are consistent with the FEIS. The proposed improvements are also consistent with the Hillsborough County and City of Tampa's Comprehensive Plans.

1.1 PURPOSE OF STUDY

The purpose of this SIMR is to document the existing conditions in the study area, the future year travel demand forecasts, and the future year traffic analyses conducted for the recommended geometric modifications.

1.2 PROJECT LIMITS AND STUDY AREA

The proposed improvements are anticipated to provide benefits at both a systems level and at a corridor level. The area of influence for the SIMR (hereafter referred to as the study area) is bounded by Kennedy Boulevard (S.R. 60) on the south, Spruce Street/Boy Scout Boulevard/Columbus Drive on the north, Memorial Highway on the west, and Ashley Street/Tampa Street on the east. The east-west roadways included in the study area are as follows:

- Kennedy Boulevard from Memorial Highway to Ashley Street;
- W. Cass Street from Howard Avenue to Ashley Street;

- Cypress Street from Memorial Highway to North Boulevard and Laurel Street from North Boulevard to Ashley Street;
- I-275 from Memorial Highway to Ashley Street; and
- Spruce Street/Boy Scout Boulevard/Columbus Drive from Memorial Highway to Tampa Street.

Although I-275 is in general a north-south limited access facility; the alignment of this roadway in the study area is east-west. Throughout this document, reference will be made to eastbound I-275 and westbound I-275, which corresponds to northbound and southbound orientations, respectively.

The north-south roadways included in the study area are as follows:

- Memorial Highway from Kennedy Boulevard to the Veterans Expressway;
- Westshore Boulevard from Kennedy Boulevard to Spruce Street/Boy Scout Boulevard;
- Lois Avenue from Kennedy Boulevard to Boy Scout Boulevard;
- Dale Mabry Highway from Kennedy Boulevard to Boy Scout Boulevard/Columbus Drive;
- Himes Avenue from Kennedy Boulevard to Columbus Drive;
- Armenia Avenue/Howard Avenue from Kennedy Boulevard to Columbus Drive;
- North Boulevard from Kennedy Boulevard to Columbus Drive; and
- Ashley Street from Kennedy Boulevard to I-275.

The SIMR project limits along I-275 extend from the eastern end of the Howard Frankland Bridge to the Ashley Street interchange, a distance of approximately 6.45 miles. The eight existing interchanges that are located within the I-275 project limits and the ramps that are included in the study area are as follows:

- Kennedy Boulevard (S.R. 60) - Ramps to/from the west only;
- Memorial Highway - Ramps to/from the east and to/from the west;
- Westshore Boulevard - Ramps to/from the east only;
- Lois Avenue - Ramps to/from the east and to/from the west;
- Dale Mabry Highway - Ramps to/from the east and to/from the west;
- Himes Avenue - Ramps to/from the east only;

- Howard/Armenia Avenue - Ramps to/from the east and to/from the west; and
- Ashley Street - Ramps to/from the west only.

Exhibit 1 illustrates the location of the I-275 corridor and the I-275 study limits as well as the SIMR area of influence.

Currently, there exists several cross street intersections that are located in close proximity to the I-275 ramp terminal intersections. Some of these cross street intersections currently have an impact on the traffic operations occurring at the ramp terminal intersections, while several others may have an impact in the future. To ensure that the future year off-ramp operations will not be negatively impacted by adjacent cross street operations, the following cross street intersections are included in the SIMR study area:

- Westshore Boulevard/Gray Street;
- Westshore Boulevard/Cypress Street;
- Lois Avenue/Cypress Street;
- Dale Mabry Highway/Cypress Street;
- Armenia Avenue/Main Street; and
- Howard Avenue/Main Street.

Section 2.0

EXISTING CONDITIONS

The purpose of this section is to document the existing conditions along the portion of the I-275 corridor included in the SIMR. Section 2.1 provides a description of the I-275 mainline laneage as well as the interchange ramp configurations and interchange spacing. Section 2.2 documents the existing daily and peak hour traffic volumes, while Section 2.3 documents the current peak hour traffic operations on I-275 based on both field observations as well as simulation model results. Included in this section is a discussion of average travel speeds, average densities, off-ramp queue lengths, and levels of service. The recent crash history on I-275 is discussed in Section 2.4, while Section 2.5 summarizes the primary geometric deficiencies that exist in the study corridor. Lastly, a summary of the key points associated with the existing conditions analysis is provided in Section 2.6.

2.1 EXISTING LANEAGE

I-275 is currently a six-lane interstate highway from the Memorial Highway interchange to the Ashley Street interchange. There is an additional auxiliary lane at the following locations:

- Eastbound I-275 from the Westshore Boulevard on-ramp to the Lois Avenue off-ramp;
- Eastbound I-275 from the Howard Avenue on-ramp to the Ashley Street/Scott Street off-ramp; and
- Westbound I-275 from the Ashley Street/Kay Street on-ramp to the Howard Avenue off-ramp.

The I-275 laneage at the west end of the project limits is more variable due to the specific interchange ramping/configurations that currently exist. In the eastbound direction, there are four mainline lanes on the Howard Frankland Bridge. One mainline lane is dropped at the Kennedy Boulevard off-ramp and a second mainline lane is dropped at the Memorial Highway/Cypress Street off-ramp with two lanes continuing eastward to the Memorial Highway on-ramp. This two-lane loop ramp adds one lane to eastbound I-275 (the other lane is tapered out) and the resulting three lanes continue to the east end of the study corridor. In the westbound direction, one of the three mainline lanes is dropped at the Memorial Highway off-ramp. Two mainline lanes continue westward from this off-ramp to the Kennedy Boulevard on-ramp. This two-lane on-ramp adds two lanes and the resulting four lanes continue westbound across the Howard Frankland Bridge.

The existing I-275 mainline laneage and the interchange ramp configurations are graphically depicted along with the existing interchange spacing on Exhibit 2. Exhibits 3 through 7 illustrate the existing intersection geometry for the ramp terminal intersections and adjacent cross street intersections within the study area.

2.2 *EXISTING TRAFFIC VOLUMES*

A traffic count program was conducted along the I-275 corridor during February and March in 1998. Seventy-two (72)-hour machine traffic counts on the I-275 mainline were conducted and provided by the FDOT District Seven Planning Department.

Twenty-four (24)-hour supplemental machine traffic counts were conducted at all of the interchange on- and off-ramps as well as for the following arterial roadways:

- Westshore Boulevard from Gray Street to Cypress Street;
- Lois Avenue from the eastbound I-275 on-/off-ramps to Cypress Street;
- Dale Mabry Highway from Cypress Street to the westbound I-275 on-/off-ramps;
- Himes Avenue from the eastbound I-275 on-ramp to the westbound I-275 off-ramp;
- Howard Avenue and Armenia Avenue from the eastbound I-275 on-/off-ramps to Main Street; and
- Cypress Street from Westshore Boulevard to Dale Mabry Highway.

Peak hour turning movement counts were conducted from 7:00 a.m. to 9:00 a.m. and from 4:30 p.m. to 6:30 p.m. at the following 18 intersections:

- WB I-275 off-ramp and Westshore Boulevard;
- EB I-275 on-ramp and Westshore Boulevard;
- Cypress Street/Westshore Boulevard;
- Gray Street/Westshore Boulevard;
- WB I-275 on-/off-ramps and Lois Avenue;
- EB I-275 on-/off-ramps and Lois Avenue;
- Cypress Street/Lois Avenue;
- WB I-275 on-/off-ramps and Dale Mabry Highway;
- EB I-275 on-ramp and Dale Mabry Highway;
- Cypress Street/Dale Mabry Highway;
- WB I-275 off-ramp and Himes Avenue;

- EB I-275 on-ramp and Himes Avenue;
- WB I-275 off-ramp and Howard Avenue;
- WB I-275 on-ramp and Armenia Avenue;
- EB I-275 off-ramp and Armenia Avenue;
- EB I-275 on-ramp and Howard Avenue;
- Armenia Avenue/Main Street; and
- Howard Avenue/Main Street.

The traffic counts were adjusted to Average Annual Daily Traffic (AADT) volumes using the seasonal adjustment factors obtained from the FDOT's traffic count database which ranged from 0.98 to 1.01. Exhibits 8A and 8B illustrate the existing AADT volumes for the I-275 mainline segments, ramps, and crossroads. Exhibits 9A and 9B illustrate the existing a.m. and p.m. peak hour volumes for the I-275 mainline and interchange ramps. The existing a.m. and p.m. peak hour volumes for the ramp terminal intersections and the adjacent cross street signalized intersections are illustrated on Exhibits 10 through 14.

2.3 *EXISTING TRAFFIC OPERATIONS*

The existing peak hour traffic operations on I-275 were evaluated using a combination of procedures. Travel time and delay runs were conducted in each direction on mainline I-275 between the Ashley Street interchange and the Westshore Boulevard interchange. These travel time and delay runs were conducted between 7:30 a.m. and 8:30 a.m. and between 5:00 p.m. and 6:00 p.m. for each day that traffic counts were conducted.

Since travel speeds are typically highest in the inside lane and lowest in the outside lane, vehicle runs were made in each of the three mainline lanes to reduce the potential for obtaining travel times that were significantly higher or lower than the overall average travel time. The individual travel times were divided by the travel distance to obtain estimates of the individual travel speeds. An average travel speed was calculated for all of the travel time runs initiated in a five-minute interval and this procedure was repeated for all twelve intervals within the peak hour.

Table 1 provides the average a.m. and p.m. peak hour travel speeds for both the eastbound and westbound travel directions. As indicated in Table 1, the average a.m. peak hour travel speed ranges from 28.66 miles/hour (at 7:40 a.m.) to 33.88 miles/hour (at 8:20 a.m.) in the eastbound direction and from 29.19 miles/hour (at 8:00 a.m.) to 39.27 miles/hour (at 7:30 a.m.) in the westbound direction. The average p.m. peak hour travel speed ranges from 20.99 miles/hour (at 5:25 p.m.) to 33.19 miles/hour (at 5:50 p.m.) in the eastbound direction and from 28.13 miles/hour (at 5:45 p.m.) to 37.70 miles/hour (at 5:00 p.m.) in the westbound direction.

TABLE 1

EXISTING PEAK HOUR MAINLINE TRAVEL SPEEDS
I-275 Systems Interchange Modification Report

A.M. Peak Hour			P.M. Peak Hour		
Start Time	Average Travel Speed (mi/hr)		Start Time	Average Travel Speed (mi/hr)	
	Eastbound ¹	Westbound ²		Eastbound ¹	Westbound ²
7:30	29.79	39.27	5:00	N/A	37.70
7:35	29.38	38.16	5:05	N/A	34.56
7:40	28.66	38.71	5:10	29.22	31.58
7:45	29.26	31.62	5:15	25.84	29.11
7:50	31.28	33.38	5:20	23.16	30.47
7:55	32.13	31.12	5:25	20.99	31.58
8:00	33.08	29.19	5:30	24.55	32.78
8:05	32.53	31.21	5:35	29.58	31.40
8:10	29.83	34.84	5:40	28.40	30.17
8:15	31.70	32.48	5:45	30.61	28.13
8:20	33.88	35.24	5:50	33.19	28.88
8:25	N/A	N/A	5:55	32.58	29.71

¹ Travel speed based on travel time runs conducted from Westshore Boulevard to Ashley Street.

² Travel speed based on travel time runs conducted from Ashley Street to Westshore Boulevard.

N/A = Not available.

An existing peak hour traffic operations analysis was also conducted using the FHWA's CORSIM software. CORSIM is a time-based microscopic, stochastic simulation model that provides visual animated displays of traffic flow through a corridor. The CORSIM model includes both a freeway simulation component (FRESIM) and a signalized arterial simulation component (NETSIM). One of the primary benefits of using CORSIM is the large number of measures of effectiveness (MOE's) that are calculated at the vehicle and roadway segment level. These MOE's include speeds, densities, moving and stopped delay, total delay, number of lane changes, number of cycle failures, and queue lengths.

The traffic environment that must be coded and input by the user prior to running the CORSIM model includes the following primary components:

- Connectivity of the roadway system (as defined by a link-node diagram);
- Geometrics of each roadway component;
- Driver behavior that determines the operational performance of vehicles in the system (e.g., acceleration/deceleration, gap acceptance, car following);

- Traffic volumes entering/exiting the roadway system;
- Turning movements or origin-designation data; and
- Traffic control devices (e.g., traffic signals, yield signs, stop signs).

The physical roadway system is represented as a network consisting of nodes and unidirectional links. The links represent freeway sections or urban street segments, while the nodes usually represent either urban area intersections or locations where a property changes (e.g., a major midblock traffic generator or a change in laneage). Both FRESIM and NETSIM model each vehicle as a separate distinct object that is “moved” every second. The behavior of each individual vehicle (and driver) is represented in the model through a distribution of vehicle types (with different operating and performance characteristics for each type of vehicle) and a distribution of driver types (ranging from timid drivers to aggressive drivers). Vehicles are moved in accordance with car-following logic, a lane-changing model, responses to traffic control devices (NETSIM), responses to off-ramp locations (FRESIM), and responses to congestion levels (i.e., queues). Each time a vehicle is moved, its lateral and longitudinal position on a link and its relationship to other nearby vehicles is recalculated along with the vehicle’s status (moving or queued), speed and acceleration/deceleration.

The existing CORSIM roadway network was coded using 1” = 100’ scale aerial photography to obtain the freeway and arterial geometrics as well as the required distances (i.e., distances between interchange ramps, distances between adjacent cross street intersections, lengths of interchange on/off-ramps and lengths of exclusive left-turn and right-turn lanes). The a.m. and p.m. peak hour volumes were then input into the model in 15-minute increments and the peak hour models were run for the full hour. Once the model runs were completed, the animated simulations were viewed for the entire peak hour to assess the reasonableness of the traffic flow throughout the study corridor. The following two criteria were used to evaluate the accuracy of the simulations:

- The average travel speed on mainline I-275; and
- The I-275 off-ramp queue lengths.

Individual vehicles entering the simulation network at the east end of the study corridor and via the westbound Ashley Street on-ramp were selected at random and the start times were recorded. These individual vehicles were “flagged” (by clicking on the vehicles while the animation was in progress) so that they could be easily tracked as they moved through the network. The times when each of these vehicles arrived at the Westshore Boulevard interchange were also recorded and the distance traveled by these vehicles was divided by their individual travel times to obtain an estimate of their individual travel speeds. This same procedure was followed for eastbound vehicles on I-275 at Westshore Boulevard (or entering I-275 via the Westshore Boulevard on-ramp) and traveling through the entire I-275 corridor to Ashley Street. Average travel speeds were only calculated for those vehicles that traveled on I-275 for the entire distance between Westshore Boulevard and Ashley Street and these random samplings of vehicles were taken in five-minute increments starting at 7:30 a.m. and at 5:00 p.m.

The average travel speeds obtained from the CORSIM model were compared to the average travel speeds obtained from the travel time and delay runs to determine whether any adjustments to the CORSIM model parameters were required. Based on this comparison, adjustments were made to the driver type car-following sensitivity factor distribution. The car-following sensitivity factors were lowered for seven of the ten driver types to account for the fact that during the peak hours, drivers on I-275 follow the vehicle in front of them more closely than that reflected in the default values.

The CORSIM model was re-run and the average travel speeds were once again compared. This iterative procedure was followed until it was determined that no further adjustments to the parameters identified above could be made to provide any closer comparison between the model results and the empirical data. The final revised car-following sensitivity factors are listed below:

- Driver Type 1 (Sensitivity Factor = 1.2);
- Driver Type 2 (Sensitivity Factor = 1.1);
- Driver Type 3 (Sensitivity Factor = 1.0);
- Driver Type 4 (Sensitivity Factor = 1.0);
- Driver Type 5 (Sensitivity Factor = 0.9);
- Driver Type 6 (Sensitivity Factor = 0.9); and
- Driver Type 7 (Sensitivity Factor = 0.8).

The default sensitivity factors associated with driver types 8, 9, and 10 were retained. In addition, the default value associated with the Pitt car-following model separation constant (i.e., 10.0 feet) was reduced to 3.0 feet.

The final results of this iterative procedure are illustrated on Exhibits 15 through 18. Exhibits 15 and 16 graphically depict the average a.m. peak hour travel speed “profile” for eastbound and westbound vehicles, respectively. The average p.m. peak hour travel speed profiles for eastbound and westbound vehicles are depicted on Exhibits 17 and 18, respectively. In addition, the overall average peak hour travel speeds were also calculated for each travel direction and these are also provided on Exhibits 15 through 18. In three of the four peak hour peak directions, the overall average travel speed estimated from the CORSIM model is within ± 11.0 percent of the overall average travel speed estimated from the field data. The one exception is the eastbound travel direction in the p.m. peak hour. Based on the field observations, the actual overall p.m. peak hour travel speed in the eastbound direction is 27.81 miles/hour. The overall average travel speed based on the CORSIM model is 43.30 miles/hour. This large difference in p.m. peak hour speed is primarily due to the influence that the I-275/I-4 interchange and the portion of I-4 to the east of the I-275/I-4 interchange has on the I-275 traffic operations to the west of this interchange.

The lack of adequate capacity on the two eastbound I-4 mainline lanes and in the I-275/I-4 interchange, coupled with the large amount of weaving that occurs within the I-275/I-4 interchange, reduces the vehicular speeds not only in these areas, but also along I-275 to the west of this

interchange. Since the eastern limit of the SIMR and hence the eastern limit of the CORSIM model network is the Ashley Street interchange ramps to/from the west, the simulation model is unable to account for the traffic operations impacts caused by this area to the east. Although the CORSIM model overestimates the p.m. peak hour travel speed in the eastbound direction, the magnitude of the overestimation remains reasonably constant as a function of time. As indicated in Exhibit 17, the vertical distance between the CORSIM model travel speed profile and the observed travel speed profile does not vary appreciably throughout the p.m. peak hour. This indicates that the CORSIM model is accurately replicating the temporal variation of travel speed and, therefore, is accurately accounting for the vehicle dynamics that are occurring within the study corridor.

Peak hour videotaping was also conducted from 7:00 a.m. to 9:00 a.m. and from 4:30 p.m. to 6:30 p.m. at the following signalized off-ramps:

- WB I-275 off-ramp to Westshore Boulevard;
- WB I-275 off-ramp to Lois Avenue;
- EB I-275 off-ramp to Lois Avenue;
- WB I-275 off-ramp to NB Dale Mabry Highway;
- EB I-275 off-ramp to SB Dale Mabry Highway;
- WB I-275 off-ramp to Himes Avenue;
- WB I-275 off-ramp to Howard Avenue; and
- EB I-275 off-ramp to Armenia Avenue.

The peak hour videotaping was conducted on the same days that the peak hour turning movement counts were conducted. The videotaping was conducted to provide information regarding the extent of the vehicle queuing that occurs on the off-ramps.

Based on these field observations it was determined that the westbound I-275 off-ramp to Lois Avenue and the westbound I-275 off-ramp to Westshore Boulevard are both currently experiencing vehicle queuing problems in the a.m. peak hour. The vehicle queue on the Lois Avenue off-ramp was observed to extend back onto the I-275 mainline between 7:45 a.m. and 8:05 a.m. and between 8:30 a.m. and 8:45 a.m. The vehicle queue on the Westshore Boulevard off-ramp was observed to extend back to the off-ramp gore area between 8:00 a.m. and 8:05 a.m.

This situation has a negative impact on the traffic operations on westbound I-275 from the Westshore Boulevard interchange to the Dale Mabry Highway interchange due to the close proximity of these three interchanges. Although the most significant impact to travel speed is experienced by the vehicles traveling in the outside lane, the off-ramp queues also have an impact on the travel speeds of the vehicles traveling in the middle and inside lanes. Vehicles entering I-275 from the Dale Mabry Highway on-ramp and the Lois Avenue on-ramp, as well as mainline through vehicles traveling in the outside lane in the vicinity of these interchanges, weave across to the middle and inside lanes when the off-ramp queues extend onto the mainline. This high frequency of lane

changes (many of which occur at low speed) reduces the speeds of the vehicles traveling in the middle and inside lanes. In addition, the current queuing that occurs on these two off-ramps creates a significant safety problem for both the ramp vehicles as well as the mainline through vehicles.

The primary reasons for the queuing problems that exist at the Lois Avenue off-ramp include the following:

- The length of the off-ramp;
- The distance between the off-ramp and the Lois Avenue/Cypress Street intersection; and
- The high volume of off-ramp traffic that is destined for locations along Cypress Street to the west of Lois Avenue.

Currently, the vehicle queues on the northbound approach at the Lois Avenue/Cypress Street intersection extend southward back to the intersection at the westbound I-275 on/off-ramps in the a.m. peak hour. Consequently, the vehicles turning right onto Lois Avenue from the off-ramp are often delayed and must wait for the northbound vehicular queue to proceed forward before executing their maneuver. In addition, the off-ramp right-turn vehicles that are destined for locations along Cypress Street to the west of Lois Avenue must merge into the outside lane of Lois Avenue and then weave across to the inside lane to access the left-turn lane. This maneuver requires the off-ramp right-turn vehicles to interact with all of the northbound Lois Avenue vehicles in a total distance of less than 300 feet. Consequently, a large proportion of the off-ramp vehicles that undertake this maneuver while the northbound Lois Avenue vehicles are moving (i.e., when the signal is displaying red for the off-ramp left-turn movement and green for the northbound Lois Avenue through movement) experience sizeable delays while waiting for acceptable gaps in the Lois Avenue traffic stream. Observations also revealed that some of the vehicles drove off the inside shoulder of the ramp and made right-turn movements from the left-turn lane to avoid waiting in the right-turn vehicle queue.

Although the Westshore Boulevard off-ramp is longer than the Lois Avenue off-ramp and can accommodate more queued vehicles, the volume of traffic exiting westbound I-275 in the a.m. peak hour at Westshore Boulevard is significantly higher than the volume of traffic exiting westbound I-275 at the Lois Avenue off-ramp (1,215 vehicles vs. 694 vehicles). In addition, the Westshore Boulevard/Cypress Street intersection is located approximately 480 feet to the north of the Westshore Boulevard ramp terminal intersection and a large proportion of this off-ramp traffic is destined for locations along Cypress Street to the west of Westshore Boulevard. Consequently, the same type of operational problems that are occurring on the portion of Lois Avenue between the westbound I-275 off-ramp and the Cypress Street intersection are occurring on the portion of Westshore Boulevard between the westbound I-275 off-ramp and the Cypress Street intersection. As a result, the Westshore Boulevard off-ramp is also experiencing a queuing problem that is impacting the I-275 mainline operations.

Although mainline travel speed was the primary measure of effectiveness that was used to calibrate the a.m. and p.m. peak hour CORSIM models, special emphasis was also placed on ensuring that the a.m. peak hour model was able to replicate the queuing conditions that were observed at the Lois

Avenue and Westshore Boulevard off-ramps. This was achieved by adjusting the “warning sign” distances associated with the off-ramps and the signal timings at the ramp terminal intersections. Warning sign distances control how far in advance of an off-ramp vehicles change lanes and position themselves in the outside lane to access a given off-ramp.

Although the CORSIM model output includes estimates of maximum queue lengths by individual link, the I-275 off-ramps are coded as a series of links comprised of several arterial (NETSIM) links, freeway (FRESIM) links and “interface” links. Consequently, it was not possible to obtain direct summary output information about the total off-ramp queuing conditions (either by individual time increment or for the entire peak hour). Consequently the peak hour animations were viewed separately for both of the off-ramps where vehicle queuing problems were observed in the field during the data collection portion of the project. Adjustments were made to the warning sign distances and the signal timings and the simulations were re-run until it was determined that the model was adequately replicating the queuing conditions at the Lois Avenue and Westshore Boulevard off-ramps. Exhibits 19 and 20 provide the a.m. peak hour CORISM queue length profiles for the Lois Avenue and Westshore Boulevard off-ramps, respectively. These queue length profiles were “generated” by viewing the simulation and recording the length of the queue at the beginning of each green phase of the off-ramp.

As indicated in Exhibit 19, the simulated Lois Avenue off-ramp queue extends beyond the off-ramp gore (onto the I-275 mainline) starting at approximately 7:46 a.m. and continuing until approximately 8:04 a.m. The simulated queue begins to extend beyond the off-ramp gore a second time at approximately 8:29 a.m. Exhibit 20 indicates that the simulated Westshore Boulevard off-ramp queue extends beyond the off-ramp gore from approximately 8:03 a.m. to 8:06 a.m. The start times and durations of the queue “spillovers” onto the I-275 mainline forecasted by the CORSIM model correlated highly with the actual observed occurrences.

As stated earlier, when off-ramp queues extend back to the mainline there is a high potential for accidents to occur. It should also be noted, however, that the potential for accidents to occur exists even when an off-ramp queue does not extend back to the gore area (or beyond). If the length of an off-ramp queue does not afford exiting vehicles sufficient distance to safely decelerate from the mainline operating speed to a stopped condition on the ramp itself, there is still a “higher-than-average” potential for accidents to occur. According to information published in the 1990 American Association of State Highway and Transportation Officials (AASHTO) “Green Book”, the minimum deceleration distance required for vehicles traveling on a highway with a design speed of 60 miles/hour to stop safely is 475 feet. This distance was subtracted from the length of the Lois Avenue and Westshore Boulevard off-ramps (measured from the stop bars to the off-ramp gores) and the remaining length was then divided by 25 feet to calculate the maximum “safe” queue lengths (i.e., the maximum number of vehicles that can be queued on the ramps and still allow exiting vehicles to decelerate to a stopped condition safely on the ramp itself). These maximum safe queue lengths are also illustrated on Exhibits 19 and 20.

There are significant periods of time during the a.m. peak hour when the maximum safe queue lengths are exceeded. As indicated on Exhibit 19, the short length of the Lois Avenue off-ramp results in a situation where the maximum safe queue length is only 3 vehicles. Consequently, the maximum safe queue length is exceeded for a total of 57 minutes during the a.m. peak hour.

Exhibit 20 indicates that the maximum safe queue length on the Westshore Boulevard off-ramp (14 vehicles) is exceeded for almost 18 consecutive minutes between 7:49 a.m. and 8:07 a.m.

The average a.m. and p.m. peak hour densities for the individual I-275 roadway segments that were estimated with the CORSIM model are graphically illustrated on Exhibits 21 and 22, respectively. The levels of service for the individual roadway segments are also illustrated on Exhibits 21 and 22. Since CORSIM does not provide level of service as part of its output, the levels of service were based on the maximum density criteria contained in Table 3-1 of the 1997 Highway Capacity Manual.

As indicated in Exhibit 21, the following portions of eastbound I-275 are currently operating at Level of Service F in the a.m. peak hour:

- From the Lois Avenue on-ramp to the Dale Mabry Highway on-ramp; and
- From the Himes Avenue on-ramp to the Ashley Street off-ramp.

In addition, the following portions of eastbound I-275 are currently operating at Level of Service E in the a.m. peak hour:

- From the Kennedy Boulevard off-ramp to the Memorial Highway/Cypress Street off-ramp;
- From the Memorial Highway on-ramp to the Westshore Boulevard on-ramp;
- From the Lois Avenue off-ramp to the Lois Avenue on-ramp; and
- From the Dale Mabry Highway on-ramp to the Himes Avenue on-ramp.

The average a.m. peak hour densities for those portions of eastbound I-275 that are currently operating at Level of Service E or F range from 35.8 vehicles/lane-mile (between the Memorial Highway on-ramp and the Westshore Boulevard on-ramp) to 71.4 vehicles/lane-mile (between the Howard Avenue on-ramp and the Ashley Street off-ramp).

In the westbound direction, the entire portion of I-275 from the Armenia Avenue on-ramp to the Westshore Boulevard off-ramp is currently operating at Level of Service F during the a.m. peak hour. In addition, two other portions of westbound I-275 are currently operating at Level of Service E and these are located as follows:

- From the Howard Avenue off-ramp to the Armenia Avenue on-ramp; and
- From the Memorial Highway on-ramp to the Kennedy Boulevard on-ramp.

The average a.m. peak hour densities for those portions of westbound I-275 that are currently operating at Level of Service E or F range from 38.8 vehicles/lane-mile (between the Howard Avenue off-ramp and the Armenia Avenue on-ramp) to 91.3 vehicles/lane-mile (between the Dale Mabry Highway on-ramp and the Lois Avenue off-ramp).

Exhibit 22 indicates that based on the CORSIM model output, only one segment of eastbound I-275 is currently operating at Level of Service F in the p.m. peak hour and this segment is located between the Himes Avenue on-ramp and the Armenia Avenue off-ramp. The CORSIM model densities associated with the portions of eastbound I-275 from the Lois Avenue on-ramp to the Dale Mabry Highway on-ramp and immediately east of the Ashley Street off-ramp are representative of Level of Service D operations. As was discussed earlier, the CORSIM model overestimates the average travel speed on I-275 in the eastbound direction during the p.m. peak hour (due to the absence of the I-275/I-4 interchange and the portion of I-4 to the east of the interchange in the CORSIM model network). Consequently, the CORSIM model is also underestimating the average density on eastbound I-275 in the p.m. peak hour. Based on field observations it can be concluded that a majority of the portion of eastbound I-275 from the Westshore Boulevard on-ramp to the Ashley Street off-ramp is currently operating at Level of Service E or F in the p.m. peak hour.

Exhibit 22 does, however, indicate that the entire portion of westbound I-275 from the Armenia Avenue on-ramp to the Kennedy Boulevard on-ramp is currently operating at Level of Service F during the p.m. peak hour. In addition, the portion of westbound I-275 between the Howard Avenue off-ramp and the Armenia Avenue on-ramp is currently operating at Level of Service E. The average p.m. peak hour densities for those portions of westbound I-275 that are currently operating at Level of Service E or F range between 40.1 vehicles/lane-mile (between the Howard Avenue off-ramp and the Armenia Avenue on-ramp) and 74.7 vehicles/lane-mile (between the Memorial Highway on- and off-ramps).

Table 2 summarizes the a.m. and p.m. peak hour signalized intersection operations for the 18 intersections included in the study area. The average vehicle delay for each lane group obtained from the CORSIM model output is provided in Table 2 along with the average vehicle delay for the overall intersection approach. As was the case with the mainline I-275 roadway segments, intersection levels of service are not part of the CORSIM model output. Consequently, the levels of service provided in Table 2 were determined based on the average vehicle delay values using the level of service criteria contained in Table 9-1 of the 1997 Highway Capacity Manual.

TABLE 2

EXISTING PEAK HOUR SIGNALIZED INTERSECTION OPERATIONS
I-275 Systems Interchange Modification Report

Intersection	Approach	Lane Group	A.M. Peak Hour		P.M. Peak Hour	
			Average Vehicle Delay (in seconds/vehicle)	Level of Service	Average Vehicle Delay (in seconds/vehicle)	Level of Service
Westshore Blvd./Gray St.	Eastbound	Left	54.4	D	55.4	E
		Through/Right	18.8	B	23.5	C
		Overall	42.9	D	43.3	D
	Westbound	Left	41.9	D	57.0	E
		Through/Right	24.3	C	20.3	C
		Overall	27.0	C	29.6	C
Northbound	Left	Left	13.2	B	15.8	B
		Through/Right	13.0	B	12.1	B
		Overall	13.0	B	12.3	B
	Southbound	Left	43.8	D	51.7	D
		Through/Right	10.6	B	10.3	B
		Overall	12.2	B	12.1	B
Westshore Blvd./Eastbound I-275 Ramp	Northbound	Through	4.1	A	12.6	B
		Right	9.3	A	14.7	B
		Overall	5.1	A	13.3	B
	Southbound	Left	78.1	E	53.7	D
		Through	N/A	N/A	N/A	N/A
		Overall	N/A	N/A	N/A	N/A
Westshore Blvd./Westbound I-275 Ramp	Westbound	Left	30.6	C	86.2	F
		Right	25.6	C	3.8	A
		Overall	27.3	C	49.2	D
	Northbound	Through	10.3	B	1.7	A
	Southbound	Through	22.0	C	21.9	C
Westshore Blvd./Cypress St.	Eastbound	Left	47.8	D	67.4	E
		Through/Right	36.5	D	50.5	D
		Overall	41.5	D	54.5	D
	Westbound	Left	49.1	D	50.0	D
		Through/Right	63.6	E	50.8	D
		Overall	61.1	E	50.6	D
Northbound	Left	Left	113.5	F	57.9	E
		Through/Right	42.6	D	40.9	D
		Overall	71.7	E	43.4	D
	Southbound	Left	152.6	F	156.0	F
		Through/Right	49.3	D	132.2	F
		Overall	65.8	E	135.1	F

TABLE 2 (CONTINUED)

EXISTING PEAK HOUR SIGNALIZED INTERSECTION OPERATIONS
I-275 Systems Interchange Modification Report

Intersection	Approach	Lane Group	A.M. Peak Hour		P.M. Peak Hour	
			Average Vehicle Delay (in seconds/vehicle)	Level of Service	Average Vehicle Delay (in seconds/vehicle)	Level of Service
Lois Ave./Eastbound I-275 Ramps	Eastbound	Left	41.9	D	28.4	C
		Right	5.0	A	5.5	A
		Overall	28.1	C	18.4	B
	Northbound	Through	3.9	A	17.4	B
		Right	0.2	A	1.3	A
		Overall	3.9	A	14.5	B
	Southbound	Left	12.3	B	16.2	B
		Through	7.5	A	7.2	A
		Overall	8.5	A	10.8	B
	Westbound	Left	44.8	D	41.3	D
		Right	35.0	C	20.5	C
		Overall	37.3	D	30.6	C
Lois Ave./Westbound I-275 Ramps	Northbound	Left	48.6	D	50.8	D
		Through	8.6	A	14.1	B
		Overall	15.2	B	21.6	C
	Southbound	Through	17.2	B	19.3	B
		Right	9.2	A	9.8	A
		Overall	16.3	B	17.2	B
	Eastbound	Left	37.4	D	93.9	F
		Through/Right	36.0	D	98.2	F
		Overall	36.1	D	98.1	F
	Westbound	Left	63.2	E	82.0	F
		Through/Right	81.4	F	25.6	C
		Overall	80.4	F	26.2	C
	Northbound	Left	57.4	E	57.2	E
		Through/Right	36.3	D	69.0	E
		Overall	46.4	D	66.8	E
Lois Ave./Cypress St.	Southbound	Left	17.1	B	119.5	F
		Through/Right	39.7	D	148.0	F
		Overall	38.1	D	145.0	F

TABLE 2 (CONTINUED)

EXISTING PEAK HOUR SIGNALIZED INTERSECTION OPERATIONS
I-275 Systems Interchange Modification Report

Intersection	Approach	Lane Group	A.M. Peak Hour		P.M. Peak Hour	
			Average Vehicle Delay (in seconds/vehicle)	Level of Service	Average Vehicle Delay (in seconds/vehicle)	Level of Service
Dale Mabry Hwy./Cypress St.	Eastbound	Left Through/Right Overall	63.1 61.8 62.2	E E E	265.2 297.6 289.8	F F F
	Westbound	Left Through/Right Overall	50.9 72.2 69.8	D E E	55.2 66.9 64.2	E E E
	Northbound	Left Through/Right Overall	101.4 14.1 21.5	F B C	80.6 16.1 18.5	F B B
	Southbound	Left Through/Right Overall	113.8 14.3 23.1	F B C	233.0 37.1 58.8	F D E
	Eastbound	Right	5.5	A	3.7	A
Dale Mabry Hwy./Eastbound I-275 Ramps	Northbound	Through Right Overall	9.8 9.0 9.6	A A A	11.7 8.1 11.2	B A B
	Southbound	Left Through Overall	85.0 N/A N/A	F N/A N/A	81.5 N/A N/A	F N/A N/A
	Westbound	Through/Right	21.1	C	12.4	B
	Northbound	Left Through Overall	80.5 7.8 15.1	F A B	89.4 4.2 10.3	F A B
Dale Mabry Hwy./Westbound I-275 Ramps	Southbound	Through Right Overall	20.4 8.9 17.4	C A B	8.5 6.5 8.0	A A A
	Northbound	Through Right Overall	5.0 2.2 4.4	A A A	4.9 2.5 4.5	A A A
	Southbound	Left Through Overall	42.3 1.4 12.0	D A B	37.6 1.0 9.4	D A A
Himes Ave./Eastbound I-275 Ramp	Westbound	Left/Through Right Overall	34.6 10.1 20.6	C B C	37.6 15.4 24.9	D B C
	Northbound	Through	2.2	A	2.5	A

TABLE 2 (CONTINUED)

EXISTING PEAK HOUR SIGNALIZED INTERSECTION OPERATIONS
I-275 Systems Interchange Modification Report

Intersection	Approach	Lane Group	A.M. Peak Hour		P.M. Peak Hour	
			Average Vehicle Delay (in seconds/vehicle)	Level of Service	Average Vehicle Delay (in seconds/vehicle)	Level of Service
Armenia Ave./Eastbound I-275 Ramp (at Laurel St.)	Southbound	Through/Right	4.4	A	4.4	A
	Eastbound	Through	11.8	B	10.8	B
		Right	10.2	B	10.7	B
	Overall		11.3	B	10.7	B
Armenia Ave./Westbound I-275 Ramp (at Green St.)	Southbound	Left	21.8	C	18.9	B
		Through	21.0	C	19.3	B
	Overall		21.2	C	19.2	B
	Westbound	Left/Through	24.3	C	22.6	C
Armenia Ave./Main St.	Southbound	Through	21.4	C	19.7	B
		Right	13.9	B	9.8	A
	Overall		20.1	C	18.1	B
	Eastbound	Through/Right	8.9	A	9.4	A
Howard Ave./Eastbound I-275 Ramp (at Laurel St.)	Westbound	Left	9.0	A	10.6	B
		Through	10.5	B	9.7	A
	Overall		9.8	A	10.2	B
	Southbound	Left/Through/Right	10.9	B	9.4	A
Howard Ave./Westbound I-275 Ramp (at Green St.)	Eastbound	Left	12.8	B	16.1	B
		Through	11.3	B	10.1	B
	Overall		11.6	B	12.4	B
	Northbound	Through	11.5	B	12.6	B
Howard Ave./Main St.	Northbound	Right	7.9	A	5.8	A
		Overall	10.4	B	10.8	B
	Westbound	Through/Right	11.0	B	12.4	B
		Left	13.3	B	11.7	B
Howard Ave./Eastbound I-275 Ramp (at Laurel St.)	Eastbound	Through	6.9	A	8.0	A
		Overall	10.0	B	9.2	A
	Northbound	Left	9.4	A	8.3	A
		Through	9.3	A	8.9	A
Howard Ave./Main St.	Eastbound	Overall	9.3	A	8.8	A
		Through/Right	7.8	A	9.7	A
	Westbound	Left/Through	8.5	A	9.6	A
		Right	5.9	A	9.2	A
Howard Ave./Main St.	Northbound	Overall	8.2	A	9.6	A
		Through/Right	7.8	A	9.7	A
	Westbound	Left/Through	8.5	A	9.6	A
		Right	5.9	A	9.2	A
Howard Ave./Main St.	Northbound	Overall	8.2	A	9.6	A
		Through/Right	7.8	A	9.7	A
	Westbound	Left/Through	8.5	A	9.6	A
		Right	5.9	A	9.2	A

In the a.m. peak hour, one or more lane groups are currently operating at Level of Service F at the following intersections:

- Westshore Boulevard/Cypress Street (the northbound and southbound left-turn lanes);
- Lois Avenue/Cypress Street (the westbound through/right-turn lanes);
- Dale Mabry Highway/Cypress Street (the northbound and southbound left-turn lanes
- Dale Mabry Highway/Eastbound I-275 on-ramp (the southbound left-turn lanes); and
- Dale Mabry Highway/Westbound I-275 on-/off-ramps (the northbound left-turn lane).

In addition, one or more lane groups are operating at Level of Service E during the a.m. peak hour at the following intersections:

- Westshore Boulevard/Eastbound I-275 on-ramp (the southbound left-turn lane);
- Westshore Boulevard/Cypress Street (the westbound through/right-turn lanes);
- Lois Avenue/Cypress Street (the westbound and northbound left-turn lanes); and
- Dale Mabry Highway/Cypress Street (the eastbound left-turn lane, the eastbound through/right-turn lanes and the westbound through/right-turn lanes).

In the p.m. peak hour, one or more lane groups are currently operating at Level of Service F at the following intersections:

- Westshore Boulevard/Westbound I-275 off-ramp (the westbound left-turn lane);
- Westshore Boulevard/Cypress Street (the southbound left-turn lane and the southbound through/right-turn lanes);
- Lois Avenue/Cypress Street (the eastbound, westbound and southbound left-turn lanes, the eastbound through/right-turn lanes and the southbound through/right-turn lanes);
- Dale Mabry Highway/Cypress Street (the eastbound, northbound, and southbound left-turn lanes and the eastbound through/right-turn lanes);
- Dale Mabry Highway/Eastbound I-275 on-ramp (the southbound left-turn lanes); and
- Dale Mabry Highway/Westbound I-275 on-/off-ramps (the northbound left-turn lane).

In addition, one or more lane groups are operating at Level of Service E at the following intersections:

- Westshore Boulevard/Gray Street (the eastbound and westbound left-turn lanes);
- Westshore Boulevard/Cypress Street (the eastbound and northbound left-turn lanes);
- Lois Avenue/Cypress Street (the northbound left-turn lane and the northbound through/right-turn lanes); and
- Dale Mabry Highway/Cypress Street (the westbound left-turn lane and the westbound through/right-turn lanes).

The a.m. and p.m. peak hour CORSIM analyses were conducted using the traffic volumes that were recorded on I-275 at the time of the traffic count program (and the travel time and delay runs) in order to calibrate the simulation model parameters and replicate the observed conditions. The existing peak hour volumes recorded on I-275 are approximately seven percent to eight percent of the average daily traffic volumes and, therefore, do not represent the volumes occurring during the 30th highest hour of the year. In recognition of this fact, an additional existing conditions analysis was conducted for the I-275 mainline using the Highway Capacity Software (HCS).

The HCS analysis was conducted for each freeway segment (i.e., between successive ramps) and was used to estimate the volume-to-capacity (v/c) ratios along I-275 during the 30th highest hour. The existing AADT volumes were multiplied by a K_{30} -factor of 9.4 percent and a D_{30} -factor of 54.0 percent and the resulting directional design hour volumes were input into the HCS analysis. The v/c ratios associated with the “existing” 30th highest hour volumes are provided on Exhibit 23. As indicated on this exhibit, almost all of the existing study corridor is operating over capacity with v/c ratios greater than 1.00. In addition, the v/c ratio for the portion of I-275 between the Memorial Highway ramps to/from the east and the Westshore Boulevard ramps to/from the east is 0.99.

2.4 EXISTING CRASH HISTORY

Crash data for I-275 from the east end of the Howard Frankland Bridge to the Ashley Street ramps to/from the west was obtained for the five year period 1993-1997 from the FDOT's files. The mainline crash history is summarized in Table 3. A total of 1,593 crashes have occurred throughout the I-275 study corridor in this five-year period. These crashes have resulted in 11 fatalities, 1,033 injuries and a total economic loss of approximately \$133.2 million.

Table 4 provides information regarding how the vehicle crashes have been distributed throughout the I-275 corridor. The location of each individual crash was plotted on straight-line diagrams provided by the FDOT and the I-275 corridor was divided into 13 segments based on the locations of the interchange on-/off-ramps. The total number of crashes occurring in each of the individual roadway segments over the five-year period was tabulated and the average yearly crash density was then calculated based on the individual segment lengths. Table 4 indicates that the average yearly crash density for the entire I-275 corridor is 49.37 crashes/mile/year. Three segments of I-275 have average yearly crash densities that are significantly higher than the overall corridor average and these include:

- I-275 between the Howard Avenue ramps to/from the east and the Ashley Street ramps to/from the west (94.32 crashes/mile/year);
- I-275 between the Lois Avenue ramps to/from the east and the Dale Mabry Highway ramps to/from the west (77.01 crashes/mile/year); and
- I-275 between the Dale Mabry Highway ramps to/from the west and the Dale Mabry Highway ramps to/from the east (68.31 crashes/mile/year).

Based on the data contained in Tables 3 and 4, it can be stated that a large number of crashes have occurred throughout the I-275 corridor and that there are several specific segments of I-275 that have experienced a higher than average frequency of crashes. These crashes have resulted in an economic loss of approximately \$133.2 million based on the "costs" associated with the fatalities, personal injuries and property damage. In addition, many of these crashes have occurred during the morning and evening peak periods when the facility is operating over capacity. These peak period crashes have resulted in stop-and-go conditions that have in turn caused motorists to experience a large amount of vehicle delay.

TABLE 3

MAINLINE CRASH DATA SUMMARY (1993 - 1997)
I-275 Systems Interchange Modification Report

Year	Beginning Mile Post	Ending Mile Post	No. of Lanes	No. of Crashes	Actual Accident Rate	Critical Accident Rate	Safety Ratio	Fatalities	Injuries	Property Damage Only	Economic Loss
1993	0.000	2.156	4	68	1.618	1.558	1.038	1	63	33	\$5,684,800
	2.156	5.431	6	157	0.973	1.313	0.741	1	126	75	13,125,200
	5.431	6.453	8	60	1.115	1.501	0.742	0	35	34	5,016,000
Total				285				2	114	142	\$23,826,000
1994	0.000	2.156	4	55	0.919	1.429	0.643	0	64	22	\$4,598,000
	2.156	5.431	6	151	1.016	1.278	0.794	1	110	80	12,623,600
	5.431	6.453	8	66	1.332	1.469	0.906	0	38	42	5,517,600
Total				272				1	212	144	\$22,739,200
1995	0.000	1.324	8	18	0.465	1.460	0.318	0	15	8	\$1,504,800
	1.324	2.156	4	26	1.273	1.717	0.741	0	20	10	2,173,600
	2.156	5.431	6	134	0.860	1.210	0.710	4	120	65	11,202,400
	5.431	6.453	8	89	1.664	1.386	1.200	0	93	34	7,440,400
Total				267				4	248	117	\$22,321,200
1996	0.000	1.371	8	15	0.370	1.640	0.225	0	5	11	\$1,254,000
	1.371	2.156	4	14	0.560	1.900	0.294	0	7	9	1,170,400
	2.156	5.431	6	197	1.141	1.369	0.833	0	145	104	16,469,200
	5.431	6.453	8	102	1.678	1.544	1.086	1	77	58	8,527,200
Total				328				1	234	182	\$27,420,800
1997	0.000	1.285	8	27	0.710	1.654	0.429	1	25	13	\$2,257,200
	1.285	2.156	4	28	1.324	1.925	0.687	0	28	12	2,340,800
	2.156	5.431	6	221	1.265	1.365	0.926	2	186	102	18,475,600
	5.431	6.453	8	165	2.714	1.541	1.761	0	156	80	13,794,000
Total				441				3	225	207	\$36,867,600
5-Year Total				1,593				11	1,033	792	\$133,174,800

TABLE 4

AVERAGE CRASH DENSITIES
I-275 Systems Interchange Modification Report

Segment		Segment Length (in miles)	5-Year Crash Total	Crashes/ Mile/Year
From	To			
East End of Howard Frankland Bridge	Kennedy Blvd. Ramps To/From the West	1.310	93	14.20
Kennedy Blvd. Ramps To/From the West	EB Off-Ramp to Memorial Hwy./Cypress St.	0.292	33	22.60
EB Off-Ramp to Memorial Hwy./Cypress St.	Memorial Hwy. Ramps To/From the West	0.524	104	39.69
Memorial Hwy. Ramps To/From the West	Memorial Hwy. Ramps To/From the East	0.275	68	49.45
Memorial Hwy. Ramps To/From the East	Westshore Blvd. Ramps To/From the West	0.459	90	39.22
Westshore Blvd. Ramps To/From the East	Lois Ave. Ramps To/From the West	0.066	18	54.55
Lois Ave. Ramps To/From the West	Lois Ave. Ramps To/From the East	0.473	123	52.01
Lois Ave. Ramps To/From the East	Dale Mabry Hwy. Ramps To/From the West	0.187	72	77.01
Dale Mabry Hwy. Ramps To/From the West	Dale Mabry Hwy. Ramps To/From the East	0.486	166	68.31
Dale Mabry Hwy. Ramps To/From the East	Himes Ave. Ramps To/From the East	0.278	82	58.99
Himes Ave. Ramps To/From the East	Armenia Ave. Ramps To/From the West	0.585	104	35.56
Armenia Ave. Ramps To/From the West	Howard Ave. Ramps To/From the East	0.496	158	63.71
Howard Ave. Ramps To/From the East	Ashley St. Ramps To/From the West	1.022	482	94.32
East End of Howard Frankland Bridge	Ashley St. Ramps To/From the West	6.453	1,593	49.37

2.5 *EXISTING GEOMETRICS*

An evaluation of the existing I-275 mainline and interchange ramp geometrics was conducted for the portion of I-275 included in the SIMR. The existing geometric data was obtained from as-built construction plans, straight line diagrams, and a Design Variation/Exception Report prepared for the I-275 pavement rehabilitation project from Kennedy Boulevard to the Himes Avenue interchange that is currently under design. This data was checked against recent aerial photography (February 1999).

The purpose of this geometric evaluation was to identify and document existing geometric deficiencies on the I-275 mainline and the interchange on-/off-ramps with respect to current criteria. For the purpose of this evaluation, geometric deficiencies were defined to be those geometric design elements that do not meet the minimum requirements documented in the January 2000 Florida Department of Transportation Plans Preparation Manual (PPM). For those geometric design elements that are not specifically identified in the FDOT's PPM, the minimum criteria documented in the 1994 American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets were used. The geometric design elements that were evaluated for this SIMR are those elements most directly related to traffic operations and safety along I-275 and at the interchanges. These include the following:

- Mainline Vertical Alignment
- Mainline Horizontal Stopping Sight Distance
- Shoulder Widths
- Interchange Ramp Lengths
- Interchange Ramp Taper Lengths
- Interchange Ramp Taper Ratios
- Interchange Ramp Degree of Divergence
- Interchange Ramp Gap Acceptance Lengths

A design speed of 60 miles/hour was used to determine the minimum criteria for those geometric design elements that are controlled by design speed. This speed is the minimum design speed for an urban Interstate facility on the Florida Intrastate Highway System (FIHS).

The results of the geometric evaluation are summarized in the following seven (7) tables:

Table 5: The lengths of the vertical curves on mainline I-275 and their corresponding K-values (a measure of curvature).

Table 6: The horizontal stopping sight distance provided by the horizontal curves on mainline I-275.

Table 7:	The inside and outside shoulder widths on the mainline I-275 roadway.
Table 8:	The inside and outside shoulder widths on the mainline I-275 bridges.
Table 9:	The inside and outside shoulder widths on the I-275 on-/off-ramps.
Table 10:	The lengths of the I-275 on-/off-ramps.
Table 11:	The I-275 on-/off-ramp terminal geometrics (acceleration/deceleration lane taper lengths, gap acceptance lengths, and off-ramp divergence angles).

The individual geometric design elements that do not meet the FDOT PPM requirements or the AASHTO requirements (i.e., the geometric deficiencies) are shaded in each of the seven tables. The existing geometric deficiencies are also graphically depicted on Exhibits 24 through 33. The six types of geometric deficiencies identified in this study are color coded and the specific locations of these deficiencies have been identified on a 1" = 200' scale topographic drawing of the existing I-275 study corridor.

The results of the I-275 SIMR geometric evaluation indicate the following:

- A majority of the study corridor has at least one geometric deficiency.
- All of the vertical curves in the study corridor are deficient based on their length and/or their K-value.
- Three of the five horizontal curves in the study corridor are deficient with respect to horizontal stopping sight distance.
- A majority of the I-275 mainline inside shoulder widths on both the roadway and the bridges are deficient.
- Approximately 60 percent of the I-275 bridges have outside shoulder widths that are deficient.
- Two of the I-275 on-ramps are deficient based on their lengths (i.e., the ramps are not long enough to allow vehicles to accelerate up to the desired speed of 47 miles/hour by the time they reach the point where the left edge of the ramp joins the outside edge of the travel lane on the freeway).
- Both of the loop ramps at the Dale Mabry Highway interchange do not provide adequate distance for vehicles to decelerate from the average running speed of the mainline to the design speed of the loop ramps (25 miles/hour).
- Three on-ramps do not provide adequate distance in the ramp terminal area (i.e., from the end of the physical gore to the end of the taper) for vehicles to merge into the mainline.

TABLE 5
EXISTING MAINLINE VERTICAL CURVES
I-275 Systems Interchange Modification Report

Crest Vertical Curves		
Location	K Value	Curve Length (in feet)
Between SR 60 (Kennedy Boulevard) and Dale Mabry Highway	158	950
	83	500
	83	500
	83	500
Between Dale Mabry Highway and Himes Avenue	83 (NB)	500 (NB)
	84 (SB)	500 (SB)
Between Himes Avenue and MacDill Avenue	83	500
Between MacDill Avenue and Armenia Avenue	144	500
Between Armenia Avenue and Howard Avenue	197	500
Between Howard Avenue and Rome Avenue	83	500
Between Rome Avenue and North Boulevard	83	500
	90	500


FDOT Plans Preparation Manual (PPM) requirements:

Minimum K Values:

150 (Sag)
300 (Crest)

Minimum Curve Lengths:

800 ft. (Sag)
1,000 ft. (Crest)

 Vertical curve does not meet FDOT Plans Preparation Manual (PPM) requirements.

Sag Vertical Curves		
Location	K Value	Curve Length (in feet)
Between SR 60 (Kennedy Boulevard) and Dale Mabry Highway	133	400
	127	400
	140	400
	125	400
	143	400
	75	450
	75 (NB)	450 (NB)
Between Dale Mabry Highway and Himes Avenue	76 (SB)	450 (SB)
Between Himes Avenue and MacDill Avenue	143 (NB)	400 (NB)
	143 (SB)	400 (SB)
	750	300
	143	400
Between MacDill Avenue and Armenia Avenue	125	350
	125	400
Between Howard Avenue and Rome Avenue	117	400
	155	400
Between Rome Avenue and North Boulevard	75	450
	75	450
Between North Boulevard and the Hillsborough River	76 (NB)	420 (NB)
	84 (SB)	462 (SB)

TABLE 6
EXISTING HORIZONTAL STOPPING SIGHT DISTANCE
I-275 Systems Interchange Modification Report

Location	Travel Direction	Existing Inside Shoulder Width (in feet)	Stopping Sight Distance Provided (in feet)	Required Inside Shoulder Width ⁽¹⁾ (in feet)
Between Occident Street and Manhattan Avenue	NB	10	>625	N/A
	SB	10	>625	N/A
Between Manhattan Avenue and Grady Avenue	NB	10	501	10.93
	SB	10	508	11.27
Between Dale Mabry Highway and Himes Avenue	NB	10	542	15.44
	SB	14	605	15.22
Between Habana Avenue and Tampania Avenue	NB	10	>625	N/A
	SB	16	>625	N/A
Between North Boulevard and the Hillsborough River	NB	6	428	19.43
	SB	10	495	20.08

☐ Horizontal Stopping Sight Distance does not meet FDOT Plans Preparation Manual (PPM) requirements.


⁽¹⁾ Inside shoulder width required to provide a horizontal stopping sight distance of 625 feet.

N/A = Not applicable.

TABLE 7
EXISTING MAINLINE SHOULDER WIDTHS
I-275 Systems Interchange Modification Report

Location	Travel Direction	Number of Lanes	Existing Width (in feet)	
			Inside Shoulder	Outside Shoulder
Between the Howard Frankland Bridge and the Kennedy Boulevard Ramps	NB	4	8P	10P
	SB	4	8P	10P
Between the Kennedy Boulevard Ramps and the Memorial Highway Ramps to/from the South	NB	3	8P	10P
	SB	2	9P	10P
Between the Memorial Highway Ramps to/from the South and to/from the North	NB	2	8P	10P
	SB	2	9P	10P
Between the Memorial Highway Ramps to/from the North and Lois Avenue	NB	3	8P	10P
	SB	3	9P	10P
Between Lois Avenue and Dale Mabry Highway	NB	3	9P	10P
	SB	3	9P	10P
Between Dale Mabry Highway and Lincoln Avenue	NB	4	16P	10P
	SB	3	16P	10P
Between Lincoln Avenue and Tampania Avenue	NB	3	8U	10P
	SB	3	8U	10P
Between Tampania Avenue and Howard Avenue	NB	3	8U	10P
	SB	3	8U	10P
Between Howard Avenue and Albany Avenue	NB	3	6F,2P,C&G	10P
	SB	3	6F,2P,C&G	10P
Between Albany Avenue and Delaware Avenue	NB	4	6F,2P,C&G	10P
	SB	4	6F,2P,C&G	10P
Between Delaware Avenue and the Hillsborough River	NB	4	15P	10P
	SB	4	15P	10P

U-Unpaved F-Full Width P-Paved Width C&G-Curb & Gutter

 Shoulder width does not meet FDOT Plans Preparation Manual (PPM) requirements.

FDOT Plans Preparation Manual (PPM) Requirements:


Minimum Inside Shoulder Width: 3 or 4 directional travel lanes
Full Width (12 ft.)/Paved Width (10 ft.)

Minimum Inside Shoulder Width: 2 directional travel lanes
Full Width (8 ft.)/Paved Width (4 ft.)

Minimum Outside Shoulder Width:
Full Width (12 ft.)/Paved Width (10 ft.)

TABLE 8
EXISTING BRIDGE SHOULDER WIDTHS
I-275 Systems Interchange Modification Report

Location	Travel Direction	Number of Lanes	Existing Width (in feet)	
			Inside Shoulder	Outside Shoulder
I-275 over Memorial Highway	SB	2	8.5	14
	NB	4	8.5	7.5
I-275 over Westshore Boulevard	SB	3	9	2
	NB	3	10	2
I-275 over Lois Avenue	SB	3	9.5	2.5
	NB	3	9	2.5
I-275 over Cypress Street	SB	3	8.5	2
	NB	3	9	2.5
I-275 over Dale Mabry Highway	SB	4	9	2
	NB	4	9	2
I-275 over Himes Avenue	SB	3	4.5	10
	NB	4	4.5	2.5
I-275 over MacDill Avenue	SB	3	4.5	10
	NB	3	4.5	10
I-275 over Armenia Avenue	SB	3	4.5	10
	NB	3	4.5	10
I-275 over Howard Avenue	SB	3	4.5	10
	NB	3	4.5	10
I-275 over Rome Avenue	SB	4	2	2
	NB	4	2	2
I-275 over Willow Avenue	SB	4	6	10
	NB	4	6	10
I-275 over North Boulevard	SB	4	2	2.5
	NB	4	2	2.5

 Shoulder width does not meet FDOT Plans Preparation Manual (PPM) requirements.

FDOT Plans Preparation Manual (PPM) Requirements:
Minimum Shoulder Width (Inside and Outside): 10 ft.


TABLE 9
EXISTING RAMP SHOULDER WIDTHS
I-275 Systems Interchange Modification Report

Location	Number of Lanes	Inside Shoulder			Outside Shoulder		
		Existing Width (in feet)	PPM Requirements		Existing Width (in feet)	PPM Requirements	
			Full Width (in feet)	Paved Width (in feet)		Full Width (in feet)	Paved Width (in feet)
KENNEDY BOULEVARD							
NB Off-ramp	2	4P	8	4	8P	12	10
SB On-ramp	2	6F,2P	8	4	8F,4P	12	10
MEMORIAL HIGHWAY							
NB On-ramp	2	8P	8	4	8F,4P	12	10
SB Off-ramp	2	6F,4P	8	4	10F,8P	12	10
WESTSHORE BOULEVARD							
NB On-ramp	1	1P	6	2	4P	6	4
SB Off-ramp	1	2P	6	2	4P	6	4
LOIS AVENUE							
NB On-ramp	1	1P	6	2	4P	6	4
NB Off-ramp	1	Curb			Curb		
SB On-ramp	1	1P	6	2	4P	6	4
SB Off-ramp	1	0	6	2	4P	6	4
DALE MABRY HIGHWAY							
NB On-ramp	1	4P	6	2	Varies	6	4
NB Off-ramp to SB Dale Mabry Highway	1	4P	6	2	5P	6	4
NB Off-ramp to NB Dale Mabry Highway	1	2P	6	2	4P	6	4
SB On-ramp	1	2P	6	2	4P	6	4
SB Off-ramp to NB Dale Mabry Highway	2	2P	8	4	4P	12	10
SB Off-ramp to SB Dale Mabry Highway	1	2P	6	2	4P	6	4
HIMES AVENUE							
NB On-ramp	1	2P	6	2	4P	6	4
SB Off-ramp	1	2P	6	2	4P	6	4
ARMENIA AVENUE							
NB Off-ramp	1	Curb			Curb		
SB On-ramp	1	Curb			Curb		
HOWARD AVENUE							
NB On-ramp	1	Curb			Curb		
SB Off-ramp	1	Curb			Curb		
U-Unpaved		F-Full Width	P-Paved Width	C&G-Curb & Gutter			

☐ Shoulder width does not meet FDOT Plans Preparation Manual (PPM) requirements.

TABLE 10
EXISTING RAMP LENGTHS
I-275 Systems Interchange Modification Report

On-Ramp Location	Ramp Type	Existing Ramp Length ⁽¹⁾ (in feet)	Required Ramp Length ⁽²⁾ (in feet)	Speed Reached at Terminal (in miles/hour)
NB ON-RAMPS				
From Lois Avenue	Taper	825	1170	40
From Dale Mabry Highway	Parallel	1480	1170	> 47
From Himes Avenue	Taper	1700	1170	> 47
SB ON-RAMPS				
From Lois Avenue	Parallel	1215	1170	> 47
From Dale Mabry Highway	Parallel	1400	1170	> 47
From Armenia Avenue	Parallel	885	1170	41
Off-Ramp Location	Ramp Type	Existing Ramp Length ⁽¹⁾ (in feet)	Required Ramp Length ⁽³⁾ (in feet)	Available Queue Length ⁽⁴⁾ (in feet)
NB OFF-RAMPS				
To Lois Avenue	Aux. Lane	790*	530	260
To SB Dale Mabry Highway	Taper	875	530	345
To NB Dale Mabry Highway (Loop)	Parallel	245**	460***	N/A
To Armenia Avenue	Taper	870	530	340
SB OFF-RAMPS				
To Westshore Boulevard	Taper	1035	530	505
To Lois Avenue	Taper	670	530	140
To NB Dale Mabry Highway	Taper	880	530	350
To SB Dale Mabry Highway (Loop)	Parallel	400**	460***	N/A
To Himes Avenue	Taper	770	530	240
To Howard Avenue	Aux. Lane	965*	530	435

 Ramp Length does not meet FDOT Plans Preparation Manual (PPM) requirements

- (1) Ramp length is defined as the distance from the 12 ft. width at the ramp terminal to the edge of the cross street.
- (2) Obtained from Table X-4 in the AASHTO Green Book based on an initial ramp speed of 0 miles/hour (stopped condition) and a freeway design speed of 60 miles/hour.
- (3) Obtained from Table X-6 in the AASHTO Green Book based on a freeway design speed of 60 miles/hour and a final ramp speed of 0 miles/hour (stopped condition).
- (4) Available queue length is calculated as: (existing ramp length) – (required ramp length).

* This ramp length is defined as the distance from the nose of the gore to the edge of the cross street.

** This ramp length is defined as the distance from the 12 ft. width at the ramp terminal to the point of curvature (PC) on the ramp.

*** This ramp length is defined as the distance required to decelerate from the mainline design speed to the ramp design speed.

N/A = Not applicable.

TABLE 11
EXISTING RAMP TERMINALS
I-275 Systems Interchange Modification Report

On-Ramps			
Location	Ramp Type	Existing Gap Acceptance Length ⁽¹⁾ (in feet)	Existing Taper Length ⁽²⁾ (in feet)
From Lois Avenue to SB I-275	Parallel	500	200
From Dale Mabry Highway to NB I-275	Parallel	850	890
From Dale Mabry Highway to SB I-275	Parallel	620	200
From Armenia Avenue to SB I-275	Parallel	190	500
Location	Ramp Type	Existing Gap Acceptance Length ⁽¹⁾ (in feet)	Existing Taper Ratio ⁽³⁾
From Lois Avenue to NB I-275	Taper	440	50:1
From Himes Avenue to NB I-275	Taper	870	50:1
From Westshore Boulevard to NB I-275	Aux. Lane	N/A	N/A
From Howard Avenue to NB I-275	Aux. Lane	N/A	N/A

Off-Ramps		
Location	Ramp Type	Existing Taper Length ⁽⁴⁾ (in feet)
SB I-275 to SB Dale Mabry Highway (Loop)	Parallel	260
NB I-275 to NB Dale Mabry Highway (Loop)	Parallel	212
Location	Ramp Type	Existing Degree of Divergence ⁽⁵⁾
SB I-275 to Westshore Boulevard	Taper	2°
SB I-275 to Lois Avenue	Taper	3°
SB I-275 to NB Dale Mabry Highway	Taper	3°
NB I-275 to SB Dale Mabry Highway	Taper	4°
SB I-275 to Himes Avenue	Taper	4°
NB I-275 to Armenia Avenue	Taper	5°
NB I-275 to Lois Avenue	Aux. Lane	4°
SB I-275 to Howard Avenue	Aux. Lane	3°

 Does not meet AASHTO requirements.

AASHTO Design Requirements

- (1) Minimum gap acceptance length = 300'.
- (2) Minimum taper length for parallel on-ramps = 300'.
- (3) Minimum taper ratio for taper on-ramps = 50:1.
- (4) Minimum taper length for parallel off-ramps = 250'.
- (5) Degree of divergence for taper off-ramps = 2° - 5°.

- The Lois Avenue and Dale Mabry Highway interchanges are characterized by multiple overlapping geometric deficiencies. Both the horizontal and vertical alignments of the I-275 mainline in these interchange areas are deficient. Shoulder width deficiencies exist on the I-275 mainline as well as on some of the ramps. Lastly, three of the six Dale Mabry Highway interchange ramps and two of the four Lois Avenue interchange ramps have inadequate ramp lengths and/or acceleration/deceleration taper lengths.

2.6 SUMMARY

Currently, the portion of I-275 in Hillsborough County from the Howard Frankland Bridge to the Ashley Street interchange is experiencing high levels of congestion in both travel directions during both the a.m. and p.m. peak hours. These high levels of congestion result in average overall peak hour freeway travel speeds that, based on actual field observations, currently range between 27.81 miles/hour and 34.11 miles/hour. Detailed microscopic simulation of the I-275 corridor using the CORSIM model indicates that a majority of the corridor is experiencing peak period vehicle densities that are representative of Level of Service E or F operating conditions. The historic crash data for this study corridor indicates that almost 1,600 crashes have occurred over this 6.45-mile segment of I-275 in a five-year period, which have resulted in a total economic loss of approximately \$133 million. The large numbers of crashes that have occurred are due to both the lack of adequate capacity on I-275 as well as the existing geometrics (both mainline and interchange ramps) present within the study corridor. Consequently, there exists a need for improvements on I-275.

Section 3.0

FUTURE YEAR TRAFFIC PROJECTIONS

The purpose of this section is to summarize the travel demand forecasting conducted for the SIMR. This section provides an overview of both the process that was used to develop the future year traffic projections along the portion of the I-275 corridor included in the SIMR as well as the specific values resulting from this process. Section 3.1 discusses the project level validation of the base year model while Section 3.2 documents the future year travel demand forecasting process (e.g., network alternatives, travel demand model output). The development of the future year average daily traffic volumes and directional design hour volumes is documented in Section 3.3 followed by a brief summary in Section 3.4.

3.1 PROJECT MODEL VALIDATION

The travel demand model that was used to derive the future year traffic projections for the I-275 SIMR is based on the FDOT District Seven Tampa Bay Regional Planning Model (TBRPM). This section of the report documents the process that was followed to ensure that the travel demand model replicated base year conditions at the project (corridor) level. The Year 2020 Financially Feasible Transportation Plan for Hillsborough County was developed by the Hillsborough County MPO and FDOT District Seven during the Long Range Transportation Plan update. The development of the Hillsborough County Financially Feasible Long Range Transportation Plan required that a base year (1995) travel demand model be validated for the Hillsborough County urban area. The 1995 TBRPM was validated on an urban area basis and approved by FDOT District Seven.

The project corridor validation was initiated by comparing the 1995 TBRPM volumes to the actual 1995 traffic counts (adjusted to reflect Peak Season Weekday Average Daily Traffic (PSWADT) volumes) on a link-by-link basis for the I-275 mainline segments. The results of this comparison are summarized in Table 12. As indicated in this table, the 1995 TBRPM mainline I-275 volumes compared favorably to the 1995 mainline counts. The volume-to-count ratios ranged from 0.88 (on I-275 west of the Himes Avenue interchange) to 1.10 (on I-275 west of the Dale Mabry Highway interchange). It should be noted, however, that a review of the traffic counts identified an inconsistency in the values recorded on I-275 west of Himes Avenue (168,600 vehicles/day) and west of Armenia Avenue (156,200 vehicles/day). The Himes Avenue interchange is a half-diamond interchange with ramps to/from the east only and, therefore, the volume on I-275 west of Armenia Avenue should be higher than the volume on I-275 west of Himes Avenue.

The next step in the project corridor validation involved comparing the volumes estimated by the TBRPM for the I-275 interchange on- and off-ramps with the actual interchange ramp counts. Actual traffic volumes on the I-275 on- and off-ramps were not available for the year 1995 since traffic counts were not taken at these locations during 1995. Traffic counts for the year 1996 were provided by the FDOT District Seven Planning Department and were used to assess the accuracy of the base year TBRPM with respect to the interchange ramp volumes. The 48-hour ramp counts were initially adjusted to AADT volumes and then subsequently adjusted to reflect PSWADT volumes

using the weekly adjustment factors and model conversion factor provided by the FDOT District Seven Planning Department.

Table 13 provides a comparison of the 1995 TBRPM PSWADT volumes and the actual 1996 PSWADT volumes for all of the existing interchange ramps within the SIMR study area. As indicated in Table 13, there were significant differences in the magnitude of the ramp volumes estimated by the TBRPM compared to the actual ramp volumes. The volume-to-count ratios ranged from a low of 0.42 (at the westbound I-275 on-ramp from Ashley Street) to a high of 3.96 (at the eastbound I-275 off-ramp to Lois Avenue). Since the ramp volumes are significantly lower than the I-275 mainline volumes (a majority of the ramp volumes are less than 15,000 vehicles/day), larger percentage differences between model volumes and actual volumes are to be expected. Although larger percentage differences are considered acceptable when the base volumes are low, it was decided that some additional modifications should be made to the base year TBRPM to improve the validation accuracy within the study corridor.

TABLE 12
1995 MAINLINE VOLUME COMPARISON
ORIGINAL TBRPM VALIDATION VOLUMES VS. ACTUAL VOLUMES
I-275 Systems Interchange Modification Report

FDOT Count Station Number	Location	1995 PSWADT Volume		Volume Ratio ⁽³⁾
		TBRPM Volume ⁽¹⁾ (veh/day)	Actual Volume ⁽²⁾ (veh/day)	
2021	I-275 West of S.R. 60/Memorial Highway	111,800	107,200	1.04
2020	I-275 East of S.R. 60/Memorial Highway	126,300	127,400	0.99
2019	I-275 East of Westshore Boulevard	159,200	145,900	1.09
2018	I-275 West of Dale Mabry Highway	154,200	140,700	1.10
5609	I-275 West of Himes Avenue	148,700	168,600	0.88
2017	I-275 West of Armenia Avenue	144,900	156,200	0.93
2016	I-275 West of Ashley Street	169,600	168,000	1.01

- (1) Volumes obtained from current FDOT District Seven Tampa Bay Regional Planning Model validation.
- (2) Actual volumes obtained from FDOT District Seven traffic data base.
- (3) Volume Ratio = TBRPM Volume/Actual Volume

TABLE 13

1995/1996 RAMP VOLUME COMPARISON
ORIGINAL TBRPM VALIDATION VOLUMES VS. ACTUAL VOLUMES
I-275 Systems Interchange Modification Report

FDOT Count Station Number	Location	1995 TBRPM PSWADT Volume ⁽¹⁾ (veh/day)	1996 Actual PSWADT Volume ⁽²⁾ (veh/day)	Volume Ratio ⁽³⁾
2661	Westbound I-275 Off-Ramp to Northbound S.R. 60/Memorial Highway	29,300	35,000	0.84
2765	Westbound I-275 On-Ramp from Southbound S.R. 60/Memorial Highway	11,600	15,100	0.77
2664	Westbound I-275 On-Ramp from S.R. 60/Kennedy Boulevard	5,800	5,900	0.98
2762	Westbound I-275 On-Ramp from Cypress Street	2,900	3,200	0.91
2663	Eastbound I-275 Off-Ramp to S.R. 60/Kennedy Boulevard	7,800	6,400	1.22
2764	Eastbound I-275 Off-Ramp to Northbound S.R. 60/Memorial Highway	7,900	15,100	0.52
2766	Eastbound I-275 On-Ramp from Southbound S.R. 60/Memorial Highway	24,500	34,400	0.71
2657	Westbound I-275 Off-Ramp to Westshore Boulevard	15,800	11,300	1.40
2660	Eastbound I-275 On-Ramp from Westshore Boulevard	16,000	11,900	1.34
2653	Westbound I-275 Off-Ramp to Lois Avenue	10,100	6,500	1.55
2654	Westbound I-275 On-Ramp from Lois Avenue	11,800	3,200	3.69
2655	Eastbound I-275 Off-Ramp to Lois Avenue	9,900	2,500	3.96
2656	Eastbound I-275 On-Ramp from Lois Avenue	6,600	5,900	1.12
2647	Westbound I-275 Off-Ramp to Northbound Dale Mabry Highway	6,500	7,900	0.82
2648	Westbound I-275 Off-Ramp to Southbound Dale Mabry Highway	4,600	5,800	0.79
2649	Westbound I-275 On-Ramp from Dale Mabry Highway	14,400	10,200	1.41
2650	Eastbound I-275 Off-Ramp to Southbound Dale Mabry Highway	5,700	2,900	1.97
2651	Eastbound I-275 Off-Ramp to Northbound Dale Mabry Highway	9,800	6,900	1.42
2652	Eastbound I-275 On-Ramp from Dale Mabry Highway	13,400	15,900	0.84
2756	Westbound I-275 Off-Ramp to Himes Avenue	9,400	6,400	1.47
2757	Eastbound I-275 On-Ramp from Himes Avenue	11,000	5,300	2.08
2643	Westbound I-275 Off-Ramp to Howard/Armenia Avenue	11,400	10,700	1.07
2644	Westbound I-275 On-Ramp from Howard/Armenia Avenue	12,500	11,600	1.08

TABLE 13 (CONTINUED)

1995/1996 RAMP VOLUME COMPARISON
ORIGINAL TBRPM VALIDATION VOLUMES VS. ACTUAL VOLUMES
I-275 Systems Interchange Modification Report

FDOT Count Station Number	Location	1995 TBRPM PSWADT Volume ⁽¹⁾ (veh/day)	1996 Actual PSWADT Volume ⁽²⁾ (veh/day)	Volume Ratio ⁽³⁾
2645	Eastbound I-275 Off-Ramp to Howard/Armenia Avenue	11,600	7,100	1.63
2646	Eastbound I-275 On-Ramp from Howard/Armenia Avenue	13,400	8,000	1.68
2639	Westbound I-275 On-Ramp from Tampa/Kay Street	15,700	9,600	1.64
2641	Westbound I-275 On-Ramp from Ashley Street	4,500	10,800	0.42
2642	Eastbound I-275 Off-Ramp to Ashley Street	7,600	12,200	0.62
2638	Eastbound I-275 Off-Ramp to Scott Street	14,300	4,600	3.11
ALL RAMPs		325,800	292,300	1.11

⁽¹⁾ Volumes obtained from current FDOT District Seven Tampa Bay Regional Planning Model validation.

⁽²⁾ Actual volumes obtained from FDOT District Seven traffic database.

⁽³⁾ Volume Ratio = TBRPM Volume/Actual Volume

A series of model validation iterations were conducted involving area type and facility type coding changes to individual on- and off-ramps. These area type and facility type changes were made to adjust the speeds of selected ramps to increase or decrease the amount of traffic assigned to the ramp by the base year model. Although these coding revisions helped to reduce the differences between the model ramp volumes and the actual ramp volumes, significant differences still existed at many of the on-/off-ramps. Based on these results, another series of model validation iterations were conducted involving the inclusion of time penalties at individual on- and off-ramps. These iterations were conducted to minimize the number of locations where time penalties were required as well as the magnitudes of the time penalties that were required. Eleven of the fourteen time penalties that were included in the final revised base year TBRPM validation are less than or equal to one minute and all of the time penalties are less than or equal to 1.70 minutes. In addition, a 0.25-minute time penalty was also included on the southbound S.R. 60/Memorial Highway link between the on-ramp to eastbound I-275 and Kennedy Boulevard.

The results of the final revised base year TBRPM validation are summarized in Tables 14 and 15. Table 14 provides a comparison of the I-275 mainline volumes obtained from the revised validated model and the actual 1995 mainline volumes. The volume-to-count ratios range from 0.92 (on I-275 west of the Himes Avenue interchange) to 1.08 (on I-275 west of the Dale Mabry Highway interchange). A comparison of the volume-to-count ratios listed in Table 12 (original model validation) and Table 14 (revised model validation) indicates that the revised TBRPM validation results in a slightly better replication of existing (1995) volumes on the I-275 mainline. Table 15 provides a comparison of the I-275 interchange ramp volumes obtained from the revised validated model and the actual (1996) ramp volumes. As indicated in this table, the differences between the model volumes and the actual volumes have been reduced (compared to the original model validation) for a majority of the on-/off-ramps. It should also be noted that the total volume for all of the on-/off-ramps within the I-275 SIMR study area in 1995 was estimated to be 278,300 vehicles/day and this total volume is within 5.0 percent of the actual total on-/off-ramp volume for 1996 (i.e., 292,300 vehicles/day). Based on the level of validation accuracy achieved within the I-275 project corridor, the revised 1995 TBRPM was determined to be acceptable for use in the future year travel demand forecasting phase of the I-275 SIMR.

TABLE 14

**1995 MAINLINE VOLUME COMPARISON
REVISED TBRPM VALIDATION VOLUMES VS. ACTUAL VOLUMES
I-275 Systems Interchange Modification Report**

FDOT Count Station Number	Location	1995 PSWADT Volume		Volume Ratio ⁽³⁾
		TBRPM Volume ⁽¹⁾ (veh/day)	Actual Volume ⁽²⁾ (veh/day)	
2021	I-275 West of S.R. 60/Memorial Highway	111,000	107,200	1.04
2020	I-275 East of S.R. 60/Memorial Highway	126,400	127,400	0.99
2019	I-275 East of Westshore Boulevard	149,900	145,900	1.03
2018	I-275 West of Dale Mabry Highway	151,300	140,700	1.08
5609	I-275 West of Himes Avenue	155,800	168,600	0.92
2017	I-275 West of Armenia Avenue	166,400	156,200	1.07
2016	I-275 West of Ashley Street	165,500	168,000	0.99

(1) Volumes obtained from revised FDOT District Seven Tampa Bay Regional Planning Model validation.

(2) Actual volumes obtained from FDOT District Seven traffic database.

(3) Volume Ratio = TBRPM Volume/Actual Volume

TABLE 15

1995/1996 RAMP VOLUME COMPARISON
REVISED TBRPM VALIDATION VOLUMES VS. ACTUAL VOLUMES
I-275 Systems Interchange Modification Report

FDOT Count Station Number	Location	1995 TBRPM PSWADT Volume ⁽¹⁾ (veh/day)	1996 Actual PSWADT Volume ⁽²⁾ (veh/day)	Volume Ratio ⁽³⁾
2661	Westbound I-275 Off-Ramp to Northbound S.R. 60/Memorial Highway	30,400	35,000	0.87
2765	Westbound I-275 On-Ramp from Southbound S.R. 60/Memorial Highway	11,700	15,100	0.77
2664	Westbound I-275 On-Ramp from S.R. 60/Kennedy Boulevard	7,000	5,900	1.19
2762	Westbound I-275 On-Ramp from Cypress Street	2,900	3,200	0.91
2663	Eastbound I-275 Off-Ramp to S.R. 60/Kennedy Boulevard	11,900	6,400	1.86
2764	Eastbound I-275 Off-Ramp to Northbound S.R. 60/Memorial Highway	7,000	15,100	0.46
2766	Eastbound I-275 On-Ramp from Southbound S.R. 60/Memorial Highway	28,100	34,400	0.82
2657	Westbound I-275 Off-Ramp to Westshore Boulevard	12,300	11,300	1.09
2660	Eastbound I-275 On-Ramp from Westshore Boulevard	11,200	11,900	0.94
2653	Westbound I-275 Off-Ramp to Lois Avenue	5,100	6,500	0.78
2654	Westbound I-275 On-Ramp from Lois Avenue	4,700	3,200	1.47
2655	Eastbound I-275 Off-Ramp to Lois Avenue	4,000	2,500	1.60
2656	Eastbound I-275 On-Ramp from Lois Avenue	5,000	5,900	0.85
2647	Westbound I-275 Off-Ramp to Northbound Dale Mabry Highway	8,600	7,900	1.09
2648	Westbound I-275 Off-Ramp to Southbound Dale Mabry Highway	4,700	5,800	0.81
2649	Westbound I-275 On-Ramp from Dale Mabry Highway	13,400	10,200	1.31
2650	Eastbound I-275 Off-Ramp to Southbound Dale Mabry Highway	1,700	2,900	0.59
2651	Eastbound I-275 Off-Ramp to Northbound Dale Mabry Highway	7,200	6,900	1.04
2652	Eastbound I-275 On-Ramp from Dale Mabry Highway	13,400	15,900	0.84
2756	Westbound I-275 Off-Ramp to Himes Avenue	5,800	6,400	0.91
2757	Eastbound I-275 On-Ramp from Himes Avenue	4,800	5,300	0.91
2643	Westbound I-275 Off-Ramp to Howard/Armenia Avenue	12,300	10,700	1.15
2644	Westbound I-275 On-Ramp from Howard/Armenia Avenue	12,000	11,600	1.03
2645	Eastbound I-275 Off-Ramp to Howard/Armenia Avenue	9,300	7,100	1.31

TABLE 15 (CONTINUED)

1995/1996 RAMP VOLUME COMPARISON
REVISED TBRPM VALIDATION VOLUMES VS. ACTUAL VOLUMES
I-275 Systems Interchange Modification Report

FDOT Count Station Number	Location	1995 TBRPM PSWADT Volume ⁽¹⁾ (veh/day)	1996 Actual PSWADT Volume ⁽²⁾ (veh/day)	Volume Ratio ⁽³⁾
2646	Eastbound I-275 On-Ramp from Howard/Armenia Avenue	8,000	8,000	1.00
2639	Westbound I-275 On-Ramp from Tampa/Kay Street	13,100	9,600	1.36
2641	Westbound I-275 On-Ramp from Ashley Street	5,800	10,800	0.54
2642	Eastbound I-275 Off-Ramp to Ashley Street	11,100	12,200	0.91
2638	Eastbound I-275 Off-Ramp to Scott Street	5,800	4,600	1.26
ALL RAMPs		278,300	292,300	0.95

⁽¹⁾ Volumes obtained from revised FDOT District Seven Tampa Bay Regional Planning Model validation.

⁽²⁾ Actual volumes obtained from FDOT District Seven traffic database.

⁽³⁾ Volume Ratio = TBRPM Volume/Actual Volume

3.2 TRAVEL DEMAND FORECASTING METHODOLOGY

Based on discussions with the FDOT District Seven Planning staff, it was agreed that the Hillsborough County MPO's current Year 2020 financially feasible transportation network (as represented in the Year 2020 TBRPM) would be used as the base network. The network coding for I-275 from the east end of the Howard Frankland Bridge to the Ashley Street interchange and for S.R. 60/Memorial Highway from the south end of the Veterans Expressway to I-275 was revised to incorporate the improvements that are currently funded within the FDOT District Seven 20-year interstate plan (which includes projects funded through the year 2020) as well as within the FDOT District Seven 2020 Florida Intrastate Highway System (FIHS) Financially Feasible Plan. These improvements are commonly referred to as the LINKS Stage 1, Stage 2, and Stage 3 improvements.

The LINKS Stage 1, 2, and 3 improvements provide one additional mainline lane in each direction on I-275 (as compared to the existing laneage) from the S.R. 60/Kennedy Boulevard ramps to/from the west to the Ashley Street ramps to/from the west. Therefore, three lanes were coded for eastbound and westbound I-275 between the S.R. 60/Kennedy Boulevard ramps to/from the west and the S.R. 60/Memorial Highway ramps to/from the east while four lanes were coded for eastbound and westbound I-275 between the S.R. 60/Memorial Highway ramps to/from the east and the Ashley Street ramps to/from the west. The network coding of the I-275 improvements also included the following:

- The eastbound I-275 off-ramp to northbound S.R. 60/Memorial Highway and Cypress Street was combined with the off-ramp to S.R. 60/Kennedy Boulevard. This was accomplished by relocating the off-ramp node from the I-275 mainline to the S.R. 60/Kennedy Boulevard ramp.
- An auxiliary lane was included on eastbound I-275 between the existing two-lane on-ramp (loop ramp) from southbound S.R. 60/Memorial Highway and the relocated Lois Avenue off-ramp. This was accomplished by coding five lanes on the eastbound I-275 mainline link between these two ramps.
- The Westshore Boulevard ramps to/from the east were "braided" with the Lois Avenue ramps to/from the west to prohibit the vehicles accessing the I-275 mainline via the Westshore Boulevard interchange from exiting via the Lois Avenue interchange (and vice-versa). This was accomplished by shifting the locations of the nodes where the Lois Avenue ramps to/from the west connect to the I-275 mainline links.
- The existing loop ramps at the Dale Mabry Highway interchange (i.e., the westbound I-275 off-ramp to southbound Dale Mabry Highway and the eastbound I-275 off-ramp to northbound Dale Mabry Highway) were eliminated to reflect a conventional diamond interchange at this location.

- The Lois Avenue ramps to/from the east were braided with the Dale Mabry Highway ramps to/from the west to prohibit the vehicles accessing the I-275 mainline via the Lois Avenue interchange from exiting via the Dale Mabry Highway interchange (and vice-versa).
- The existing westbound I-275 off-ramp to Lois Avenue was relocated to Cypress Street just east of the existing Lois Avenue/Cypress Street intersection.
- Auxiliary lanes were included on eastbound and westbound I-275 between the Westshore Boulevard ramps to/from the east and the Dale Mabry Highway ramps to/from the west. This was accomplished by coding five lanes on the I-275 mainline link between these ramps.
- Auxiliary lanes were included on eastbound and westbound I-275 between the Howard/Armenia Avenue ramps to/from the east and the Ashley Street ramps to/from the west.

A second network alternative was developed by revising the network coding on I-275 from the east end of the Howard Frankland Bridge to the Ashley Street interchange to match the I-275 coding included in the base year (1995) TBRPM. This network was used as the No-Build Alternative since it contained the existing mainline laneage and interchange ramp configurations for the portion of I-275 within the SIMR study area. This No-Build Alternative does, however, include all of the other transportation network improvements included in the Year 2020 Financially Feasible Transportation Plan. The network coding currently included in the 2020 TBRPM for the portion of S.R. 60/Memorial Highway from the south end of the Veterans Expressway to I-275 and for the downtown I-275/I-4 interchange was reviewed and modified to ensure that the network coding was consistent with the LINKS Stage 1 Improvement project and the I-275/I-4 Operational and Safety Improvements Project.

Once the network coding of the alternatives was completed, the future year socio-economic and land use data (i.e., the ZDATA files) were obtained from the FDOT District Seven Planning Department. The ZDATA files for the years 2010 and 2020 were previously developed by the Hillsborough County MPO. The ZDATA files for the years 2015 and 2025 were developed by the FDOT through interpolation and extrapolation of the previously developed ZDATA files.

The TBRPM was run with the 2025 ZDATA files for all of the network alternatives and the resulting 2025 PSWADT volume assignments were plotted. Eight north/south screenlines extending from just south of Swann Avenue to just north of Dr. Martin Luther King, Jr. Boulevard were established to compare the east/west travel demand associated with the different alternatives at various locations along the study corridor. The Year 2025 north/south screenline volume comparison is summarized in Table 16. As indicated in this table, the additional capacity provided on I-275 as a result of the implementation of the Stage 1, 2, and 3 improvements is projected to result in a slight increase in total east/west travel demand when compared to the No-Build Alternative. The overall increase in east/west travel demand ranges between 3.1 percent (west of North Boulevard) and 5.9 percent (west of Westshore Boulevard). Given the nature of the improvements proposed for the I-275 corridor, it is not unreasonable to expect that this additional capacity would have some effect on regional travel patterns.

Although the Stage 1, 2, and 3 improvements are not projected to have any significant impact on the total east/west travel demand in the area, they are projected to have an impact on the distribution of this total east/west travel demand. Tables 17 and 18 summarize the distribution of the total 2025 north/south screenline volumes at each of the eight screenlines for the Build and No-Build Alternatives. The 2025 PSWADT volumes for the six primary east/west corridors in the area are individually listed in Tables 17 and 18. These primary corridors include the following:

- Dr. Martin Luther King, Jr. Boulevard
- Spruce Street/Boy Scout Boulevard/Columbus Drive
- I-275
- Cypress Street/Cass Street
- S.R. 60/Kennedy Boulevard
- Azeele Street/Platt Street

TABLE 16
YEAR 2025 NORTH/SOUTH SCREENLINE VOLUME COMPARISON
I-275 Systems Interchange Modification Report

Screenline No.	Screenline Location	2025 PSWADT Volume (veh/day)	
		No-Build Alternative	Stage 1, 2, and 3 Improvements
1	West of Westshore Boulevard	357,743	378,789
2	East of Trask Street	383,922	403,657
3	West of Dale Mabry Highway	500,821	524,961
4	West of Himes Avenue	470,708	489,978
5	West of MacDill Avenue	462,574	485,594
6	East of Howard/Armenia Avenue	411,045	427,652
7	West of North Boulevard	451,351	465,363
8	East of North Boulevard	443,967	459,208

TABLE 17

**YEAR 2025 NORTH/SOUTH SCREENLINE VOLUME DISTRIBUTION
NO-BUILD ALTERNATIVE
I-275 Systems Interchange Modification Report**

Roadway	2025 PSWADT Volume (veh/day)							
	Screenline 1	Screenline 2	Screenline 3	Screenline 4	Screenline 5	Screenline 6	Screenline 7	Screenline 8
Dr. M.L. King, Jr. Boulevard	N/A	N/A	26,543	38,125	51,181	42,239	48,103	46,466
Spruce Street/Boy Scout Boulevard/ Columbus Drive	63,955	60,868	70,172	40,948	25,998	40,591	30,590	11,687
I-275	180,932	211,195	200,329	195,312	208,510	217,048	217,048	217,048
Cypress Street/Cass Street	41,553	29,740	43,494	37,914	21,188	19,263	26,788	26,805
S.R. 60/Kennedy Boulevard	71,303	58,569	47,076	37,135	52,710	33,915	34,819	30,186
Azele Street/Platt Street	N/A	13,197	12,530	18,018	24,698	17,933	22,273	22,210
All Others	N/A	10,353	100,677	103,256	78,289	40,056	71,730	89,565
TOTAL	357,743	383,922	500,821	470,708	462,574	411,045	451,351	443,967
% of Total Screenline Volume on I-275	50.58%	55.01%	40.00%	41.49%	45.08%	52.80%	48.09%	48.89%

N/A - Not Applicable

TABLE 18

**YEAR 2025 NORTH/SOUTH SCREENLINE VOLUME DISTRIBUTION-
STAGE 1, 2, AND 3 IMPROVEMENTS
I-275 Systems Interchange Modification Report**

	2025 PSWADT Volume (veh/day)							
	Screenline 1	Screenline 2	Screenline 3	Screenline 4	Screenline 5	Screenline 6	Screenline 7	Screenline 8
Dr. M.L. King, Jr. Boulevard	N/A	N/A	25,645	38,992	51,655	42,908	50,654	48,099
Spruce Street/Boy Scout Boulevard/ Columbus Drive	65,565	60,128	67,150	39,498	21,879	37,910	28,297	12,080
I-275	207,256	237,152	242,029	231,645	252,065	243,782	243,782	243,782
Cypress Street/Cass Street	38,449	30,690	36,499	34,578	18,980	15,845	20,313	22,587
S.R. 60/Kennedy Boulevard	67,519	56,843	46,788	36,499	48,498	31,567	29,280	24,563
Azeale Street/Platt Street	N/A	8,877	9,944	11,676	23,512	17,176	18,383	20,042
All Others	N/A	9,967	96,906	97,090	69,005	38,464	74,654	88,055
TOTAL	378,789	403,657	524,961	489,978	485,594	427,652	465,363	459,208
% of Total Screenline Volume on I-275	54.72%	58.75%	46.10%	47.28%	51.91%	57.00%	52.39%	53.09%

N/A - Not Applicable

The combined total 2025 PSWADT volume on all of the other east/west roadways included in the TBRPM is also provided in Tables 17 and 18. As indicated in Table 17, the percentage of the total 2025 east/west travel demand that is projected to use I-275 in the No-Build Alternative ranges between 40.0 percent and 55.0 percent. Table 18 indicates that with the Stage 1, 2, and 3 improvements, the percentage of the total 2025 east/west travel demand that is projected to use I-275 ranges between 46.1 percent and 58.8 percent. These results are also reasonable since the provision of additional capacity on I-275 is expected to divert trips from the other parallel east/west arterials.

The projected impact of the proposed I-275 improvements on the Year 2025 north/south travel demand in the vicinity of the I-275 corridor was also reviewed. Nine east/west screenlines extending from just west of Westshore Boulevard to just east of North Boulevard were established and the Year 2025 east/west screenline volume comparison is summarized in Table 19. As indicated in this table, the additional capacity provided on I-275 as a result of the implementation of the Stage 1, 2, and 3 improvements is not projected to have any significant impact on the total north/south travel demand when compared to the No-Build Alternative.

Tables 20 and 21 summarize the distribution of the total 2025 east/west screenline volumes at each of the nine screenlines for the two alternatives. The 2025 PSWADT volumes for the seven primary north/south corridors in the study area are individually listed in Tables 20 and 21. These primary north/south corridors include the following:

- Westshore Boulevard
- Lois Avenue
- Dale Mabry Highway
- Himes Avenue
- MacDill Avenue
- Armenia/Howard Avenue
- North Boulevard

TABLE 19

YEAR 2025 EAST/WEST SCREENLINE VOLUME COMPARISON
I-275 Systems Interchange Modification Report

Screenline No.	Screenline Location	2025 PSWADT Volume (veh/day)	
		No-Build Alternative	Stage 1, 2, and 3 Improvements
1	South of Azeele Street/Platt Street	342,437	335,063
2	South of S.R. 60/Kennedy Boulevard	295,209	286,392
3	North of S.R. 60/Kennedy Boulevard	331,743	320,938
4	South of Cass Street	290,247	285,521
5	South of Cypress Street	316,083	318,844
6	North of Cypress Street	292,847	302,633
7	North of I-275	288,022	288,891
8	South of Columbus Drive	248,113	247,967
9	North of Columbus Drive	245,832	241,520

TABLE 20

**YEAR 2025 EAST/WEST SCREENLINE VOLUME DISTRIBUTION-
NO-BUILD ALTERNATIVE
I-275 Systems Interchange Modification Report**

Roadway	2025 PSWADT Volume (veh/day)								
	Screenline 1	Screenline 2	Screenline 3	Screenline 4	Screenline 5	Screenline 6	Screenline 7	Screenline 8	Screenline 9
Westshore Boulevard	39,240	51,304	43,781	50,526	58,241	53,420	47,755	N/A	N/A
Lois Avenue	20,262	19,932	33,563	43,178	49,118	37,885	30,092	N/A	N/A
Dale Mabry Highway	43,392	48,381	45,764	54,011	54,011	58,389	61,193	63,817	90,949
Himes Avenue	25,595	25,522	28,233	28,801	34,443	37,320	38,174	31,677	43,931
MacDill Avenue	25,766	28,317	25,984	25,984	28,024	26,759	24,305	23,507	21,138
Armenia/Howard Avenue	31,468	44,158	47,240	47,254	49,942	51,085	45,820	40,662	53,004
North Boulevard	10,631	21,361	14,625	18,693	20,480	16,608	17,393	22,337	17,397
All Others	146,083	56,234	92,553	21,800	21,824	11,381	23,290	74,465	19,413
TOTAL	342,437	295,209	331,743	290,247	316,083	292,847	288,022	248,113	245,832

N/A - Not Applicable

TABLE 21

**YEAR 2025 EAST/WEST SCREENLINE VOLUME DISTRIBUTION-
STAGE 1, 2, AND 3 IMPROVEMENTS
I-275 Systems Interchange Modification Report**

Roadway	2025 PSWADT Volume (veh/day)								
	Screenline 1	Screenline 2	Screenline 3	Screenline 4	Screenline 5	Screenline 6	Screenline 7	Screenline 8	Screenline 9
Westshore Boulevard	38,205	45,890	42,854	49,305	57,135	54,179	50,347	N/A	N/A
Lois Avenue	19,802	21,179	32,654	42,489	46,541	37,637	29,267	N/A	N/A
Dale Mabry Highway	47,311	48,448	47,910	54,440	54,440	63,826	60,324	60,383	92,292
Himes Avenue	24,243	28,215	27,708	30,320	36,509	39,465	41,108	34,303	46,032
MacDill Avenue	23,342	24,264	27,404	27,404	28,679	27,404	23,950	19,384	17,862
Armenia/Howard Avenue	32,804	44,928	45,632	45,830	49,601	51,850	43,867	38,779	50,671
North Boulevard	8,129	15,723	15,874	19,717	21,278	17,127	17,249	20,824	16,028
All Others	141,227	57,745	80,902	16,016	24,661	11,145	22,779	74,294	18,635
TOTAL	335,063	286,392	320,938	285,521	318,844	302,633	288,891	247,967	241,520

N/A - Not Applicable

The combined total 2025 PSWADT volume on all of the other north/south roadways included in the TBRPM is also provided in Tables 20 and 21. A comparison of Tables 20 and 21 indicates that the distribution of total north/south travel is not significantly affected by the implementation of the Stage 1, 2, and 3 improvements. These results are not unreasonable since the proposed improvements are east/west capacity improvements and not north/south capacity improvements.

The 2025 PSWADT volumes for the interchange ramps were reviewed to assess the reasonableness of the projections. A comparison of the 2025 PSWADT volumes on complimentary on- and off-ramps (e.g., the eastbound I-275 off-ramp to Lois Avenue and the westbound I-275 on-ramp from Lois Avenue) was conducted and the results of this comparison identified large imbalances in the volumes projected for the following complimentary ramps:

- The westbound I-275 off-ramp to northbound S.R. 60/Memorial Highway and the eastbound I-275 on-ramp from southbound S.R. 60/Memorial Highway (both alternatives).
- The westbound I-275 on-ramp from Dale Mabry Highway and the eastbound I-275 off-ramp to Dale Mabry Highway (with the Stage 1, 2, and 3 improvements); and
- The westbound I-275 on-ramp from Howard/Armenia Avenue and the eastbound I-275 off-ramp to Howard/Armenia Avenue (both alternatives).

Select link analyses and volume traces were conducted for these interchange on-/off-ramps to examine the specific travel patterns that were projected by the TBRPM. A review of the volume traces identified the following:

- The number of vehicles that were projected to enter westbound I-275 at the Dale Mabry Highway interchange and then exit I-275 and travel north on S.R. 60/Memorial Highway was higher than the number of vehicles projected for the reciprocal travel pattern (i.e., entering eastbound I-275 at the southbound S.R. 60/Memorial Highway on-ramp and exiting I-275 at the Dale Mabry Highway interchange); and
- Some of the vehicles projected to use the eastbound I-275 off-ramp to Kennedy Boulevard had destinations north or east of the Spruce Street/Tampa International Airport interchange and were traveling northbound on the portion of S.R. 60/Memorial Highway between Kennedy Boulevard and I-275.

These anomalies in the travel paths were eliminated through manual reassignment of the individual movements identified from the select link trace assignments.

The TBRPM was also run with the 2015 ZDATA files developed by the FDOT District Seven Planning Department for the No-Build Alternative and for the Stage 1, 2, and 3 improvements. The 2015 PSWADT volumes for the interchange ramps were also reviewed to assess the reasonableness of the projections. A comparison of the 2015 PSWADT volumes on complimentary on- and off-

ramps was conducted and once again, the results of this comparison identified several imbalances that were adjusted through manual reassignment of individual movements.

3.3 DEVELOPMENT OF DESIGN HOUR VOLUMES

Average Annual Daily Traffic (AADT) volumes were derived using the 2025 and 2015 PSWADT volumes obtained from the TBRPM output. The PSWADT volumes were multiplied by a model conversion factor (MOCF) of 0.99 and the resulting values were used as the estimated AADT volumes. The MOCF for I-275 in Hillsborough County was obtained from the 1998 Peak Season Factor Category Report published by the FDOT's Transportation Statistics Office and verified with FDOT District Seven Planning Department staff. The 2025 AADT volumes for the No-Build and Build Alternatives are depicted on Exhibits 34 and 35 while the 2015 AADT volumes for the two alternatives are depicted on Exhibits 36 and 37.

The 2025 AADT volumes were compared to the 1998 AADT volumes to assess the growth in traffic volumes that is projected to occur over the 27-year period. The 1998 AADT volumes were obtained from the traffic counts that were conducted in support of the existing conditions analysis phase of the I-275 SIMR. Table 22 provides a listing of the 1998 I-275 mainline AADT volumes along with the 2025 mainline AADT volumes for the two alternatives. Annual mainline traffic growth rates were calculated for each location for both alternatives and these growth rates are also listed in Table 22.

The annual growth in mainline AADT volume for the No-Build Alternative ranges between 0.52 percent/year and 1.38 percent/year with an overall average value of 0.93 percent/year. As indicated in Table 23, a review of the most recent daily traffic volumes recorded at five locations on mainline I-275 between Memorial Highway and Ashley Street for the period from 1995 to 1998 reveals that the AADT volumes on I-275 have been increasing at an overall average rate of approximately 1.0 percent/year. This low average growth rate is indicative of the capacity constrained conditions that currently exist on the portion of I-275 between Memorial Highway and Ashley Street. It is reasonable to expect that in the absence of any additional capacity on I-275, the recent low traffic growth rates will continue to persist into the future.

Table 22 also indicates that with the Stage 1, 2, and 3 improvements, the annual growth in mainline AADT volume is projected to vary between 1.16 percent/year and 2.16 percent/year with a corridor average annual growth rate of 1.69 percent/year. Therefore, the implementation of the additional capacity provided by the Stage 1, 2, and 3 improvements is projected to almost double the recent annual growth in traffic that has been occurring on the I-275 mainline.

Table 24 provides a listing of the 1998 AADT volumes for the interchange on-/off-ramps along with the 2025 AADT ramp volumes for the two alternatives. Annual growth rates were calculated for each pair of complimentary on-/off-ramps and these growth rates are also listed in Table 24.

TABLE 22

I-275 MAINLINE VOLUME GROWTH RATE COMPARISON
I-275 Systems Interchange Modification Report

Location	1998 AADT Volume	No-Build Alternative		Stage 1, 2, and 3 Improvements	
		2025 AADT Volume	Annual Growth Rate	2025 AADT Volume	Annual Growth Rate
At the East End of the Howard Frankland Bridge	120,900	154,500	1.03%	168,500	1.46%
Between the Memorial Highway Ramps to/from the West and the Memorial Highway Ramps to/from the East	64,100	82,800	1.08%	100,600	2.11%
Between Memorial Highway and Westshore Boulevard	124,700	171,200	1.38%	197,300	2.16%
Between Westshore Boulevard and Lois Avenue	148,000	203,100	1.38%	232,700	2.12%
Between Lois Avenue and Dale Mabry Highway	150,400	198,300	1.18%	233,700	2.05%
Between Dale Mabry Highway and Himes Avenue	165,200	193,400	0.63%	229,300	1.44%
Between Himes Avenue and Armenia Avenue	179,000	206,400	0.57%	249,500	1.46%
Between Armenia Avenue and Howard Avenue	159,100	181,450	0.52%	214,700	1.29%
Between Howard Avenue and Ashley Street	183,800	214,900	0.63%	241,300	1.16%
Corridor Average (from the Howard Frankland Bridge to Ashley Street)			0.93%		1.69%

TABLE 23

RECENT I-275 MAINLINE VOLUME GROWTH RATES (1995-1998)
I-275 Systems Interchange Modification Report

Location	1995 AADT Volume	1998 AADT Volume	3-Year Annual Growth Rate
Between Memorial Highway and Westshore Boulevard	120,000	124,500	1.25%
Between Westshore Boulevard and Lois Avenue	141,500	148,000	1.53%
Between Lois Avenue and Dale Mabry Highway	148,500 ⁽¹⁾	152,000 ⁽²⁾	0.79%
Between Dale Mabry Highway and Himes Avenue	163,500	165,500	0.41%
Between Armenia Avenue and Howard Avenue	151,500	156,800 ⁽³⁾	1.17%
AVERAGE			1.03%

(1) 1994 AADT Volume

(2) 1997 AADT Volume

(3) Estimated by averaging the 1997 and 1998 AADT Volumes due to significant fluctuations in volume from 1996 to 1998.

TABLE 24

I-275 ON-/OFF-RAMP VOLUME GROWTH RATE COMPARISON
I-275 Systems Interchange Modification Report

Location	1998 AADT Volume	No-Build Alternative		Stage 1, 2, and 3 Improvements	
		2025 AADT Volume	Annual Growth Rate	2025 AADT Volume	Annual Growth Rate
Kennedy Boulevard/Memorial Highway/Cypress Street to/from the West	56,800	71,700	0.97%	67,900	0.72%
Memorial Highway to/from the East	60,600	88,400	1.70%	96,700	2.21%
Westshore Boulevard and Trask Street to/from the East	23,300	31,900	1.37%	35,400	1.92%
Lois Avenue to/from the West	9,600	24,100	5.59%	21,200	4.48%
Lois Avenue to/from the East	12,000	19,200	2.22%	22,200	3.15%
Dale Mabry Highway to/from the West	20,200	32,800	2.31%	33,400	2.42%
Dale Mabry Highway to/from the East	28,000	27,800	-0.03%	29,000	0.13%
Himes Avenue to/from the East	13,800	13,100	-0.19%	20,200	1.72%
Armenia Avenue to/from the West	19,900	25,000	0.95%	34,900	2.79%
Howard Avenue to/from East	24,700	33,400	1.30%	26,700	0.30%
North Boulevard to/from West	N/A	N/A	N/A	N/A	N/A
Ashley Street/Scott Street to/from the West	37,700	41,800	0.40%	54,900	1.69%
All Ramps to/from the West	137,200	195,400	1.57%	212,300	2.03%
All Ramps to/from the East	169,400	213,800	0.97%	230,200	1.33%

The 2010 AADT volumes for the No-Build Alternative and for the Stage 1, 2, and 3 improvements were derived by interpolating between the 1998 AADT volumes and the 2015 AADT volumes. The 2010 AADT volumes are illustrated on Exhibits 38 and 39.

The directional design hour volumes for I-275 were derived by multiplying the AADT volumes by a K_{30} -factor of 9.4 percent and a D_{30} -factor of 54.0 percent. The K_{30} -factor is the ratio of the traffic volume in the 30th highest hour of the year to the AADT volume (expressed as a percentage of the AADT volume). The D_{30} -factor is the percentage of the two-way peak hour volume in the 30th highest hour that occurs in the peak direction. These values were previously documented in the approved I-275 SIMR Methodology Letter of Understanding. The 2025 directional design hour volumes are depicted in Exhibits 40 and 41. The 2015 directional design hour volumes are depicted in Exhibits 42 and 43. Exhibits 44 and 45 provide the 2010 directional design hour volumes.

3.4 SUMMARY

Future year daily and design hour traffic projections were developed for the I-275 SIMR using the FDOT District Seven Tampa Bay Regional Planning Model (TBRPM). The previously validated base year (1995) TBRPM was modified to better replicate the base year travel demand in the I-275 study corridor. Using this modified base year model validation, future year networks were coded for I-275 and the future year Peak Season Weekday Average Daily Traffic (PSWADT) volumes were obtained through execution of the Year 2020 Financially Feasible TBRPM. The PSWADT volumes were estimated for a No-Build Alternative as well as for the LINKS Stage 1, 2, and 3 improvements that are proposed for the I-275 corridor.

The PSWADT volume projections obtained from the TBRPM model applications were reviewed for reasonableness and subsequently converted to Average Annual Daily Traffic (AADT) volumes. Directional design hour volumes were then derived by multiplying the AADT volumes by K_{30} - and D_{30} -factors.

Section 4.0

FUTURE YEAR CONDITIONS

This section summarizes the future year traffic analysis that was conducted for both the No-Build Alternative and the Stage 1, 2, and 3 improvements (i.e., the Build Alternative). Section 4.1 provides a description of the proposed improvements along with a discussion of the benefits that are expected to be obtained from these improvements. Section 4.2 provides a discussion of the results of the traffic analysis that was conducted for the future years. Section 4.3 provides a summary of the future conditions.

4.1 *RECOMMENDED IMPROVEMENT CONCEPT*

The ultimate improvements for the I-275 corridor were documented in the TIS FEIS that was approved by FHWA in December, 1996. These ultimate improvements consist of a four-roadway system with a local freeway on the outside and an express freeway on the inside. The improvements documented in the FEIS also include geometric modifications to the existing interchanges along I-275. The improvements that are documented in this SIMR represent the financially feasible portion of the ultimate improvement concept and include the construction of a majority of the ultimate local access freeway lanes and a majority of the ultimate interchange modifications. The construction of the express freeway lanes will be deferred until sometime after the construction of the improvements documented in this SIMR. Consequently, the SIMR improvements represent “interim improvements” that must be implemented before the remaining portion of the additional mainline capacity improvements can be implemented.

According to the approved FEIS, almost all of the improvements discussed in this SIMR are considered to be part of the Long Term Preferred Alternative – not the Selected Alternative. At the time the FEIS was signed by the FHWA, the Hillsborough County MPO’s Year 2015 Financially Feasible Long Range Transportation Plan did not include any improvements on I-275 between Lois Avenue and the Hillsborough River. Since the approval of the FEIS, the Hillsborough County MPO has updated their Financially Feasible Long Range Transportation Plan to the Year 2020 and has included the LINKS Stage 2 and 3 improvements from Kennedy Boulevard to the Hillsborough River.

The recommended improvement concept for I-275 is graphically illustrated on Exhibits 46 through 55. The primary geometric improvements that are proposed for the I-275 corridor include the following:

- The construction of the ultimate Kennedy Boulevard bridge over I-275 included in the TIS FEIS (this bridge is for the westbound I-275 on-ramp);
- The modification of the existing two-lane eastbound I-275 off-ramp to Kennedy Boulevard to provide access to both Kennedy Boulevard and northbound Memorial Highway as included in the TIS FEIS. (Approximately 800 feet

downstream from this off-ramp gore, a single lane off-ramp serving northbound Memorial Highway would diverge from the two lanes that tie into existing Kennedy Boulevard. This single lane ramp would run parallel to the I-275 mainline and tie into the existing single lane off-ramp to Memorial Highway prior to the existing bridge).

- The shifting of the existing eastbound I-275 mainline 12 feet to the north and the widening of the existing bridge over Memorial Highway to provide one additional eastbound I-275 lane (on the inside). This is necessary to provide three eastbound mainline lanes from the combined Kennedy Boulevard/Memorial Highway off-ramp to the existing two-lane loop ramp from southbound Memorial Highway and to avoid reconstruction of this loop ramp.
- The inside lane of the two-lane loop ramp from southbound Memorial Highway to eastbound I-275 that is currently tapered out will be extended over to the Lois Avenue off-ramp as an auxiliary lane. This will result in five lanes being provided between the Memorial Highway on-ramp and the Lois Avenue off-ramp. The capacity and operations on I-275 will be improved since the inside lane on the loop ramp is currently tapered out after joining the mainline.
- The provision of a two-lane eastbound I-275 off-ramp to Lois Avenue. (A single lane off-ramp is currently provided with the ultimate TIS FEIS improvement.) It should be noted that this will also require the widening of the single lane structure carrying the Lois Avenue off-ramp over the Westshore Boulevard/Trask Street on-ramp that is currently included in the approved FEIS.
- A new four-lane eastbound freeway on new alignment will be constructed beginning just to the west of Westshore Boulevard. This new four-lane freeway will transition back to the existing freeway alignment at the west end of the Hillsborough River Bridge via temporary pavement.
- A new four-lane westbound freeway will be constructed from the east end of the Hillsborough River Bridge to Trask Street. Beginning at Trask Street, the four lanes will transition back to the existing freeway alignment west of Westshore Boulevard. The new eastbound and westbound freeways that will be constructed are the local access freeway portion of the ultimate improvements documented in the approved TIS FEIS.
- One additional mainline lane is provided on westbound I-275 from the northbound Memorial Highway off-ramp to the Kennedy Boulevard on-ramp. This improvement will provide lane balance at the Memorial Highway diverge area as well as one additional lane of capacity on I-275 in the westbound direction through the Memorial Highway interchange. This improvement will require widening of the existing structure carrying westbound I-275 over S.R. 60 and lengthening the existing structure carrying Kennedy Boulevard over westbound I-275.

- The tapering of the westbound I-275 on-ramp from Kennedy Boulevard from two lanes to one lane prior to the merge with mainline I-275. This modification is required due to the provision of the additional mainline lane east of the merge area.
- The Westshore Boulevard ramps to/from the east are “braided” (physically separated via structures) with the Lois Avenue ramps to/from the west.
- The two existing loop ramps at the Dale Mabry Highway interchange (i.e., the westbound I-275 off-ramp to southbound Dale Mabry and the eastbound I-275 off-ramp to northbound Dale Mabry) are eliminated and the other four ramps are realigned to provide a conventional diamond interchange.
- The Lois Avenue ramps to/from the east are braided with the Dale Mabry Highway ramps to/from the west.
- The existing westbound I-275 off-ramp to Lois Avenue is relocated to Cypress Street east of the Lois Avenue/Cypress Street intersection.
- Auxiliary lanes are provided in both the eastbound and westbound directions between the Westshore Boulevard ramps to/from the east and the Dale Mabry Highway ramps to/from the west.
- Auxiliary lanes are provided in both the eastbound and westbound directions between the Dale Mabry Highway ramps to/from the east and the Armenia Avenue ramps to/from the west.
- The auxiliary lane that currently exists on westbound I-275 from the combined Ashley Street/Kay Street on-ramp to the Howard Avenue off-ramp will be retained.
- The auxiliary lane that currently exists on eastbound I-275 from the Howard Avenue on-ramp to the combined Ashley Street/Scott Street off-ramp will also be retained.

With two exceptions, all of the Interstate modifications described above are the same as the Interstate modifications contained in the approved TIS FEIS. The Dale Mabry Highway interchange configuration documented in the FEIS consists of a single point diamond interchange with left-side on-/off-ramps in all four quadrants. The right-of-way impacts associated with the implementation of the ultimate four roadway system (i.e., local access freeway lanes located on the outside of express freeway lanes) required the elimination of the existing loop ramps located in the northwest and southeast quadrants. The elimination of the loop ramps required the signalization of two additional left-turn movements (i.e., the westbound I-275 to southbound Dale Mabry Highway movement and the eastbound I-275 to northbound Dale Mabry Highway movement). In order to increase the capacity of the diamond interchange and be able to accommodate the additional left-turn vehicles without having to construct additional structures and braid the Lois Avenue ramps with the Dale Mabry Highway ramps, a single point diamond interchange (i.e., all interchange traffic movements

controlled by one signal) was recommended. The implementation of a single point diamond interchange required that all four on-/off-ramps be left-side ramps.

With the provision of left-side ramps at the Dale Mabry Highway interchange, any vehicle desiring to access I-275 from Westshore Boulevard and exit I-275 at Dale Mabry Highway (or the reciprocal movement) would be required to weave from one side of the freeway to the other. With the implementation of the entire TIS FEIS improvement concept (i.e., the ultimate improvements), this weaving maneuver between Westshore Boulevard and Dale Mabry Highway would require that two lane changes be made across only the local access freeway through vehicles. With only the implementation of the local access freeway component of the ultimate improvements and the desire to provide one additional lane of capacity in both directions on I-275 (resulting in four lanes on I-275 in each direction), this same weaving maneuver would now require that three lane changes be made across the entire volume of through vehicles. The combination of the additional lane change required to accomplish the weaving maneuver and the increased volume that would be present in the weaving area would have a negative impact on the safety and operations of this portion of I-275.

Based on the above, a revised Dale Mabry Highway interchange concept was developed. The revisions to the Dale Mabry Highway interchange improvement concept consist of replacing the left-side on-/off-ramps with right-side on-/off-ramps and converting the single point diamond interchange to a conventional diamond interchange. Although the implementation of a conventional diamond interchange will provide less capacity than a single point diamond interchange (since opposing left-turn movements cannot be processed through the interchange simultaneously), it will eliminate the need for Westshore Boulevard vehicles to weave across all lanes of I-275 to access Dale Mabry Highway (and vice versa). It will also eliminate the need for Howard Avenue vehicles to weave across all lanes of I-275 to access Dale Mabry Highway (and vice versa).

The provision of right-side on-/off-ramps at the Dale Mabry Highway interchange and the short distance between this interchange and the Lois Avenue interchange required that a revision also be made to the Lois Avenue interchange concept documented in the TIS FEIS. The Dale Mabry Highway ramps to/from the west are braided with the Lois Avenue ramps to/from the east.

The provision of braided on- and off-ramps between Westshore Boulevard, Lois Avenue, and Dale Mabry Highway will preclude “one interchange trips” (i.e., vehicles entering I-275 from one interchange and exiting I-275 at the next interchange) from being made on I-275 in this area. This reduction in local trips on I-275 is expected to provide a benefit for the longer distance travel on I-275. The provision of braided on- and off-ramps also allows longer ramps to be provided in this area than could otherwise be provided due to the close spacing of the interchanges. The longer on-ramps will allow vehicles more time to accelerate to the speed needed to merge with the mainline vehicles while the longer off-ramps will allow vehicles to safely decelerate from the mainline travel speed to a stopped condition on the ramp itself and minimize the possibility of off-ramp queues extending back onto the mainline. Lastly, the braided ramps will reduce the turbulence in the outside travel lanes since the volumes in the outside lanes upstream of the on-ramp gore areas are lower due to the off-ramp traffic exiting the mainline prior to the on-ramp traffic entering the mainline.

The provision of auxiliary lanes between the Westshore Boulevard interchange and the Dale Mabry Highway interchange as well as between the Dale Mabry Highway interchange and the Armenia

Avenue/Howard Avenue interchange are also expected to improve the operations on mainline I-275 since the vehicles entering and exiting I-275 at these ramps will have additional distance (and hence, time) to merge/diverge with the mainline through vehicles. The implementation of auxiliary lanes will also reduce the turbulence that would otherwise occur in the outside through lanes on I-275.

The improved geometrics associated with the reconstructed mainline I-275 are also expected to reduce the potential for future accidents to occur. Table 25 summarizes the K-values and the lengths of the vertical curves for the proposed roadway improvements. As indicated in this table, all of the proposed crest and sag vertical curves are expected to exceed the FDOT PPM minimum requirements and a majority of the vertical curves will significantly exceed the minimum requirements. Table 26 summarizes the proposed horizontal stopping sight distances that will be provided with the four horizontal curves. Three of the four horizontal curves are expected to provide stopping sight distances greater than the FDOT PPM minimum required value of 625 feet. Although the proposed horizontal curve in the vicinity of Lois Avenue (i.e., between Manhattan Avenue and Cypress Street) only provides a horizontal stopping sight distance of 614 feet in the northbound (eastbound) travel direction and 605 feet in the southbound (westbound) travel direction, the minimum required stopping sight distance could be provided with a slight increase in the width of the inside shoulder. This will be evaluated in more detail as a part of the final design phase of the project. In addition, all of the bridge and ramp shoulder widths will be designed to meet the FDOT PPM requirements. Although the true impact of geometric deficiencies on traffic operations cannot be easily quantified, the existing I-275 geometrics do have a negative impact on the flow of traffic along this corridor. Given the significant improvements that are proposed for the geometric design elements associated with both the I-275 mainline and the interchange on- and off-ramps (i.e., horizontal and vertical alignment, shoulder widths, ramp lengths, ramp tapers), it is expected that the flow of traffic along the I-275 corridor will be greatly improved.

TABLE 25
PROPOSED MAINLINE VERTICAL CURVES
I-275 Systems Interchange Modification Report

Crest Vertical Curves		
Location	K Value	Curve Length (in feet)
Between SR 60 (Kennedy Boulevard) and Dale Mabry Highway	1077 (NB) 1239 (SB)	1800 (NB) 1800 (SB)
Between Dale Mabry Highway and Himes Avenue	752 (NB) 564 (SB)	2100 (NB) 1800 (SB)
Between Himes Avenue and MacDill Avenue	545 (NB) 433 (SB)	1800 (NB) 1800 (SB)
Between MacDill Avenue and Armenia Avenue	390 (NB) 380 (SB)	1200 (NB) 1750 (SB)
Between Howard Avenue and Rome Avenue	405 (NB) 387 (SB)	1200 (NB) 1200 (SB)

FDOT Plans Preparation Manual (PPM) requirements:

Minimum K Values:

150 (Sag)

300 (Crest)

Minimum Curve Lengths:


800 ft. (Sag)

1,000 ft. (Crest)

Sag Vertical Curves		
Location	K Value	Curve Length (in feet)
Between SR 60 (Kennedy Boulevard) and Dale Mabry Highway	363 (NB) 161 (SB) 460 (NB) 663 (SB)	800 (NB) 800 (SB) 800 (NB) 800 (SB)
Between Himes Avenue and MacDill Avenue	233 (NB) 173 (SB)	800 (NB) 850 (SB)
Between MacDill Avenue and Armenia Avenue	263 (NB) 209 (SB)	800 (NB) 900 (SB)
Between Howard Avenue and Rome Avenue	234 (NB) 242 (SB)	800 (NB) 800 (SB)
Between Rome Avenue and North Boulevard	351 (NB) 301 (SB)	800 (NB) 800 (SB)

TABLE 26
PROPOSED HORIZONTAL STOPPING SIGHT DISTANCE
I-275 Systems Interchange Modification Report

Location	Travel Direction	Proposed Inside Shoulder Width (in feet)	Stopping Sight Distance Provided (in feet)	Required Inside Shoulder Width ⁽¹⁾ (in feet)
Between Manhattan Avenue and Cypress Street	NB	10	614	10.54
	SB	10	605	11.03
Between Cypress Street and Himes Avenue	NB	10	>625	N/A
	SB	10	>625	N/A
Between Himes Avenue and Habana Avenue	NB	12	>625	N/A
	SB	12	>625	N/A
Between Habana Avenue and Albany Avenue	NB	12	>625	N/A
	SB	12	>625	N/A

 Horizontal Stopping Sight Distance does not meet FDOT Plans Preparation Manual (PPM) requirements.

⁽¹⁾ Inside shoulder width required to provide a horizontal stopping sight distance of 625 feet.

N/A = Not applicable.

4.2 FUTURE YEAR TRAFFIC ANALYSIS

Future year traffic analyses were conducted for both the No-Build Alternative (i.e., the existing I-275 laneage) and the Build Alternative (i.e., the proposed Stage 1, 2, and 3 improvements) using the latest version of the Highway Capacity Manual Software (HCS). The traffic analyses were conducted for the years 2010, 2015, and 2025 using the directional design hour volumes developed previously and documented in Section 3.0 of this report. Color-coded graphics depicting the mainline laneage and interchange ramp configurations (in lane line diagram format) along with the projected mainline volume-to-capacity (v/c) ratios are provided in a series of six exhibits. These exhibits are as follows:

- Exhibit 56: Year 2010 Volume-to-Capacity Ratios (No-Build Alternative)
- Exhibit 57: Year 2010 Volume-to-Capacity Ratios (Build Alternative)
- Exhibit 58: Year 2015 Volume-to-Capacity Ratios (No-Build Alternative)
- Exhibit 59: Year 2015 Volume-to-Capacity Ratios (Build Alternative)
- Exhibit 60: Year 2025 Volume-to-Capacity Ratios (No-Build Alternative)
- Exhibit 61: Year 2025 Volume-to-Capacity Ratios (Build Alternative)

As previously discussed in Section 4.1 of this report, several auxiliary lanes are proposed as part of the overall I-275 improvements. Although almost all of the auxiliary lanes are greater than 3,500 feet in length, and in some cases exceed 4,000 feet in length, the auxiliary lanes were not included in the capacity analyses (and v/c ratio calculations) if they only extended from one on-ramp to the immediately adjacent off-ramp. This was considered to be a conservative approach to the capacity analyses since auxiliary lanes do add capacity to the interstate (although often times the additional capacity is less than the capacity of one basic freeway lane).

The decision to summarize v/c ratios instead of levels of service was based on the fact that a majority of the mainline I-275 segments are projected to operate over capacity (i.e., at Level of Service F) by the year 2015 even with the proposed improvements. Although the future year peak hour volumes on I-275 are projected to exceed the capacity provided by the proposed improvements, a comparison between the Build and No-Build Alternatives indicates a substantial improvement in the v/c ratios with the proposed improvements.

Exhibit 58 indicates that by the year 2015, almost all of the existing I-275 study corridor is projected to operate with v/c ratios ranging between 1.30 and 1.63. Exhibit 60 indicates that by the year 2025, a majority of the existing I-275 study corridor is projected to operate with v/c ratios ranging between 1.34 and 1.69. In contrast, Exhibit 59 indicates that with the implementation of the proposed improvements by the year 2015, a majority of the study corridor is projected to operate with v/c ratios ranging between 1.00 and 1.13. Only the segments between the Armenia Avenue ramps and the Howard Avenue ramps and between the Howard Avenue ramps and the Ashley Street ramps are projected to operate with v/c ratios greater than or equal to 1.19. Exhibit 61 indicates that by the

year 2025, a majority of the study corridor is projected to operate with v/c ratios ranging between 1.03 and 1.17 if the proposed improvements are implemented. The three locations that are projected to operate with v/c ratios greater than 1.20 include the following:

- Between the Westshore Boulevard ramps and the Dale Mabry Highway ramps (v/c for the eastbound segment = 1.24 and v/c for the westbound segment = 1.23);
- Between the Armenia Avenue ramps and the Howard Avenue ramps (v/c for the eastbound segment = 1.26 and v/c for the westbound segment = 1.25); and
- Between the Howard Avenue ramps and the Ashley Street ramps (v/c = 1.41 for both the eastbound and westbound segments).

A comparison of the existing v/c ratios on Exhibit 23 with the projected v/c ratios for the Build Alternative in 2010 and 2015 (on Exhibits 57 and 59, respectively), indicates that if the proposed improvements are constructed and open to traffic sometime between 2010 and 2015, they are projected to result in a significant improvement in I-275 mainline operations (as compared to the current conditions). A comparison of the existing v/c ratios with the projected 2025 v/c ratios for the Build Alternative (on Exhibit 61) indicates that even though a majority of the I-275 corridor is projected to operate over capacity in the year 2025 with the proposed improvements, a portion of the corridor is projected to operate with lower v/c ratios than what currently exists today if the improvements are constructed.

An additional analysis of the proposed improvements was conducted using the CORSIM model that was previously calibrated during the existing conditions analysis portion of the study. Due to the high v/c ratios projected to occur on I-275 in the year 2025, the CORSIM analysis was conducted for the year 2015. Morning and evening peak hour intersection turning movement volumes for a majority of the intersections in the study area were derived for the year 2015 by first multiplying the AADT projections by a K_{30} -factor of 9.4 percent and a D_{30} -factor of 54.0 percent and then multiplying the directional link volumes by the existing turning movement percentages. Morning and evening peak hour intersection turning movement volumes for the Cypress Street intersections and the Lois Avenue intersections were derived for the year 2015 using a K_{30} -factor of 9.4 percent and a D_{30} -factor of 60.0 percent. A higher directional distribution factor was used for these locations due to the high level of directionality associated with the existing peak hour traffic volumes on Cypress Street from Dale Mabry Highway to Westshore Boulevard and on Lois Avenue from south of I-275 to Cypress Street. The estimated Year 2015 a.m. and p.m. peak hour volumes used in the CORSIM analysis are illustrated on Exhibits 62 through 66.

The initial Year 2015 a.m. and p.m. peak hour simulations were conducted using the same portion of the arterial network that was included in the existing conditions simulations. During the visual reviews of the initial 2015 simulation runs, many vehicles were observed to be causing excessively long queues on the mainline due to their failure to change lanes prior to arriving at the gore area of their desired off-ramp. This type of driver behavior was not realistic and was causing a significant negative impact on the traffic flow along the corridor. Consequently, modifications were made to

several additional CORSIM parameter default values to eliminate (or minimize) these driver behaviors. The specific modifications that were made to the default values were as follows:

- The minimum headway required for a driver to change lanes was reduced from 2.0 seconds to 1.0 second;
- The maximum headway required for a driver to change lanes was reduced from 5.0 seconds to 4.0 seconds;
- The necessary distance required for a driver to change lanes was increased from 300 feet to 2,000 feet; and
- The driver's familiarity with their path was revised from 10.0 percent (knowing one "turn" in advance)/90.0 percent (knowing two "turns" in advance) to 1.0 percent (knowing one "turn" in advance)/99.0 percent (knowing two "turns" in advance).

The results of the revised initial simulations indicated that the adjacent cross street intersections at Westshore Boulevard and Cypress Street, Lois Avenue and Cypress Street, and Dale Mabry Highway and Cypress Street were all operating over capacity and were experiencing severe queuing conditions that impacted the I-275 mainline. Approximately 15 minutes into the peak hour simulation, the queues from these adjacent cross street intersections were projected to extend back into the I-275 ramp terminal intersections, which blocked the flow of traffic from the off-ramps onto the arterial street network. This in turn, caused the off-ramp queues to extend back onto the I-275 mainline and reduce the flow of traffic on the mainline. Consequently, the lack of adequate capacity on Cypress Street was prohibiting the simulation model from being able to demonstrate the operational benefits that would be expected to occur specifically due to the implementation of the I-275 improvements.

Based on these results, a second simulation analysis was conducted. The second simulation analysis was conducted in an incremental manner to determine the amount of additional peak hour traffic volume that could be accommodated with the proposed improvements prior to the point where the surface street intersection capacity constraints begin to impact the Interstate system. The 2015 a.m. and p.m. peak hour volumes were decreased and the CORSIM model was re-run in an iterative manner until the simulation indicated that the queues at the adjacent local street intersections had begun to impact the off-ramp operations. With this approach, the CORSIM model was able to demonstrate the operational benefits that would be expected to occur on the I-275 mainline and the off-ramps with the implementation of the recommended improvements.

The results of the incremental simulation analysis indicate that approximately 80.0 percent of the 2015 a.m. peak hour volumes and 85.0 percent of the 2015 p.m. peak hour volumes can be accommodated without any significant negative impact occurring on the I-275 mainline as a result of adjacent cross street intersection queuing problems. Two compact discs (CDs) containing the a.m. and p.m. peak hour CORSIM files for the simulations conducted at the 80.0 percent and 85.0 percent levels are included in this report. Since CORSIM is a stochastic model that randomly assigns vehicles to the roadway network prior to the beginning of the simulation time period, CORSIM should be run multiple times using different initial network "loadings" and the model

output data should be averaged to eliminate the potential for obtaining skewed or biased results. Both the a.m. and p.m. simulations were conducted a total of ten times using different random seed numbers to “generate” different initial network loadings and the input and output files for all ten simulations are provided on the CDs.

Table 27 provides a listing of the individual mainline I-275 segment speeds and densities (by travel direction) that were estimated from each of the 10 a.m. peak hour CORSIM simulations. The average a.m. peak hour speeds and densities that were calculated for each of the individual mainline I-275 segments are also provided in Table 27 along with the weighted average corridor travel speeds. In the westbound direction, the average speed ranges from 44.1 miles/hour (between the Lois Avenue on-ramp and the Memorial Highway off-ramp) to 57.1 miles/hour (between the Ashley Street/Kay Street on-ramp and the Howard Avenue off-ramp) with an average overall corridor speed of 53.1 miles/hour. In the eastbound direction, the average speed ranges from 43.4 miles/hour (between the Himes Avenue on-ramp and the Armenia Avenue off-ramp) to 55.8 miles/hour (between the Dale Mabry Highway on-ramp and the Himes Avenue on-ramp) with an average overall corridor speed of 50.8 miles/hour.

Table 28 provides a listing of the individual mainline I-275 segment speeds and densities (by travel direction) that were estimated from each of the 10 p.m. peak hour CORSIM simulations. The average p.m. peak hour speeds and densities that were calculated for each of the individual mainline I-275 segments are also provided in Table 28 along with the weighted average corridor travel speeds. In the westbound direction, the average speed ranges from 44.7 miles/hour (between the Lois Avenue on-ramp and the Memorial Highway off-ramp) to 56.8 miles/hour (between the Ashley Street/Kay Street on-ramp and the Howard Avenue off-ramp) with an average overall corridor speed of 53.2 miles/hour. In the eastbound direction, the average speed ranges from 22.7 miles/hour (between the Himes Avenue on-ramp and the Armenia Avenue off-ramp) to 53.9 miles/hour (between the combined Kennedy Boulevard/Memorial Highway off-ramp and the Memorial Highway on-ramp) with an average overall corridor speed of 45.1 miles/hour.

The average a.m. and p.m. peak hour densities for the individual I-275 mainline segments that were estimated with the CORSIM model are also graphically illustrated on Exhibits 67 and 68, respectively. The levels of service for the individual mainline segments are also provided on Exhibits 67 and 68. These levels of service were based on the maximum density criteria contained in Table 3-1 of the 1997 Highway Capacity Manual. Exhibit 67 indicates that all of the I-275 mainline is projected to operate at Level of Service E or better (and a significant portion of the I-275 mainline is projected to operate at Level of Service D or better) in the a.m. peak hour with 80.0 percent of the unconstrained 2015 design hour volumes. Three areas are projected to operate at Level of Service E in the eastbound direction. These areas are located between the Lois Avenue off-ramp and the Westshore Boulevard/Trask Street on-ramp, between the Lois Avenue on-ramp and the Dale Mabry Highway on-ramp and between the Himes Avenue on-ramp and the Ashley Street/Scott Street off-ramp.

TABLE 27

YEAR 2015 A.M. PEAK HOUR CORSIM MODEL SPEEDS AND DENSITIES FOR I-275 MAINLINE
I-275 Systems Interchange Modification Report

From	To	Simulation Number																				Average	
		1		2		3		4		5		6		7		8		9		10			
		Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density
WESTBOUND I-275																							
Ashley/Kay On-Ramp	Howard Off-Ramp	57.3	29.6	57.1	29.7	57.1	29.7	56.9	29.8	57.1	29.6	56.9	29.8	57.1	29.7	57.1	29.6	57.3	29.6	57.0	29.7	57.1	29.7
Howard Off-Ramp	Armenia On-Ramp	53.6	33.0	53.7	32.9	53.5	33.0	53.2	33.3	53.8	32.7	53.7	33.0	53.2	33.3	53.5	33.0	53.6	33.4	53.5	33.0	53.5	33.0
Armenia On-Ramp	Himes Off-Ramp	51.5	32.1	51.9	31.8	51.5	32.1	51.3	32.2	51.6	31.9	52.1	31.7	51.6	32.0	51.3	32.1	52.1	31.9	51.4	32.2	51.6	32.0
Himes Off-Ramp	Dale Mabry Off-Ramp	49.8	30.6	51.7	29.2	52.2	28.9	50.4	30.1	50.5	29.9	50.3	30.2	49.1	30.7	49.4	30.6	50.8	30.1	50.8	29.8	50.5	30.0
Dale Mabry Off-Ramp	Cypress Off-Ramp	47.8	34.6	49.9	32.5	50.4	32.2	49.1	33.4	48.2	33.9	50.2	32.6	48.2	33.7	49.1	33.3	49.0	33.5	50.8	31.9	49.3	33.2
Cypress Off-Ramp	Dale Mabry On-Ramp	50.6	29.6	51.5	28.5	51.7	28.4	51.5	28.5	51.3	28.6	52.1	28.2	51.1	28.5	51.5	28.4	51.4	28.7	52.0	28.1	51.5	28.6
Dale Mabry On-Ramp	Westshore/Trask Off-Ramp	52.0	26.8	52.5	26.0	52.4	26.2	53.2	25.8	54.3	25.0	53.9	25.5	53.5	25.4	53.7	25.5	53.5	25.8	53.8	25.1	53.3	25.7
Westshore/Trask Off-Ramp	Lois On-Ramp	52.9	26.9	53.6	26.1	53.3	26.3	53.0	26.3	53.7	25.9	53.8	26.1	53.3	26.1	53.4	26.3	53.5	26.1	53.8	25.7	53.4	26.2
Lois On-Ramp	Memorial Off-Ramp	43.4	37.5	44.6	35.3	45.8	34.5	43.0	36.7	44.7	35.2	44.6	35.6	42.2	37.9	43.9	36.1	43.3	37.1	45.7	33.9	44.1	36.0
Memorial Off-Ramp	Memorial On-Ramp	54.9	18.4	55.7	17.6	55.2	18.0	54.7	18.0	55.2	17.9	55.7	17.9	54.8	17.9	54.9	18.2	54.6	18.4	55.2	17.8	55.1	18.0
Memorial On-Ramp	Kennedy On-Ramp	54.2	26.9	54.4	26.2	54.1	26.6	53.9	26.5	54.4	26.3	54.1	26.5	53.7	26.6	53.9	26.8	53.8	26.8	54.1	26.3	54.0	26.6
Kennedy On-Ramp	Howard Frankland Bridge	55.9	23.4	56.0	22.8	55.9	23.2	55.9	23.0	56.1	23.0	55.9	23.1	55.8	23.0	55.7	23.4	55.8	23.3	56.0	23.0	55.9	23.1
WEIGHTED AVERAGE CORRIDOR SPEED																						53.1	
EASTBOUND I-275																							
Howard Frankland Bridge	Kennedy/Memorial Off-Ramp	54.0	28.1	54.0	28.1	53.9	28.2	54.5	27.8	54.3	27.9	54.0	28.1	54.1	28.0	54.3	28.0	53.6	28.3	54.2	28.0	54.1	28.0
Kennedy/Memorial Off-Ramp	Memorial On-Ramp	54.5	22.5	54.5	22.4	54.4	22.3	54.4	22.5	54.5	22.6	54.4	22.4	54.5	22.1	54.3	22.6	54.6	22.2	54.6	22.3	54.5	22.4
Memorial On-Ramp	Lois Off-Ramp	49.7	29.0	49.7	28.9	49.9	28.7	50.3	28.6	50.5	28.7	49.8	28.9	49.8	28.7	49.7	29.0	49.9	28.7	49.7	28.9	49.9	28.8
Lois Off-Ramp	Westshore/Trask On-Ramp	50.0	32.1	49.5	32.1	49.8	32.1	49.9	32.3	50.3	31.9	49.7	32.1	49.4	32.2	50.1	31.8	49.8	32.2	49.7	32.2	49.8	32.1
Westshore/Trask On-Ramp	Dale Mabry Off-Ramp	48.7	30.8	47.3	31.5	48.8	31.0	41.4	34.9	48.3	31.1	45.2	32.4	47.7	31.4	48.9	31.0	49.6	30.6	45.2	32.8	47.1	31.7
Dale Mabry Off-Ramp	Lois On-Ramp	51.1	31.2	50.2	31.7	50.4	31.4	50.4	31.7	50.3	32.0	50.6	31.1	50.1	31.8	49.7	32.3	49.9	32.2	49.8	31.7	50.3	31.7
Lois On-Ramp	Dale Mabry On-Ramp	52.7	32.9	53.4	32.3	53.0	32.3	53.2	32.3	53.1	32.6	53.6	31.8	52.7	32.8	52.7	33.0	52.7	33.2	52.7	32.4	53.0	32.6
Dale Mabry On-Ramp	Himes On-Ramp	55.8	28.3	56.4	27.8	55.6	28.0	55.6	28.1	55.9	28.1	56.0	27.9	55.5	28.4	55.3	28.6	55.7	28.6	55.9	27.7	55.8	28.2
Himes On-Ramp	Armenia Off-Ramp	43.7	40.6	42.2	42.2	40.2	45.2	42.8	42.2	40.6	43.8	44.0	40.4	43.2	41.7	46.4	37.6	44.9	39.8	45.7	37.9	43.4	41.1
Armenia Off-Ramp	Howard On-Ramp	51.5	35.3	51.6	34.9	51.0	35.4	51.0	35.2	51.1	35.3	51.1	35.3	50.7	35.6	51.8	35.0	51.2	35.9	52.0	34.5	51.3	35.2
Howard On-Ramp	Ashley/Scott Off-Ramp	46.5	36.4	48.6	33.9	45.8	36.7	50.0	32.7	47.8	34.7	48.9	33.5	48.3	34.1	50.9	32.4	48.6	34.3	50.1	32.5	48.6	34.1
WEIGHTED AVERAGE CORRIDOR SPEED																						50.8	

Note: All speeds are in miles per hour. All densities are in vehicles per lane mile.
The 2015 A.M. peak hour volumes used in these simulations represent 80% of the unconstrained design hour volumes.

TABLE 28

**YEAR 2015 P.M. PEAK HOUR CORSIM MODEL SPEEDS AND DENSITIES FOR I-275 MAINLINE
I-275 Systems Interchange Modification Report**

From	To									Simulation Number												Average	
		1		2		3		4		5		6		7		8		9		10			
		Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density	Speed	Density
WESTBOUND I-275																							
Ashley/Kay On-Ramp	Howard Off-Ramp	57.0	30.1	56.8	30.1	57.0	30.1	56.7	30.2	56.6	30.2	56.9	30.1	56.4	30.3	56.7	30.2	57.0	30.0	57.0	30.0	56.8	30.1
Howard Off-Ramp	Armenia On-Ramp	53.4	33.4	53.1	33.4	53.1	33.6	53.2	33.4	52.7	33.8	53.5	33.2	52.9	34.0	53.3	33.5	53.4	33.5	53.5	33.4	53.2	33.5
Armenia On-Ramp	Himes Off-Ramp	51.9	31.6	51.8	31.7	51.5	32.0	52.0	31.5	51.1	32.2	52.1	31.4	50.7	32.6	51.5	31.9	50.8	32.5	52.2	31.5	51.6	31.9
Himes Off-Ramp	Dale Mabry Off-Ramp	50.6	29.8	52.3	28.9	50.1	30.1	51.2	29.5	50.7	29.7	51.5	29.2	49.8	30.4	51.7	29.3	50.4	30.1	51.5	29.4	51.0	29.6
Dale Mabry Off-Ramp	Cypress Off-Ramp	48.7	33.7	48.9	33.6	50.4	32.2	49.5	32.9	49.4	32.9	50.4	31.8	47.7	34.3	50.0	32.7	49.3	33.2	50.4	32.5	49.5	33.0
Cypress Off-Ramp	Dale Mabry On-Ramp	51.2	28.9	51.6	28.5	51.8	28.3	51.2	28.7	51.7	28.3	51.8	28.1	51.1	28.9	51.8	28.6	50.8	29.0	51.2	28.9	51.4	28.6
Dale Mabry On-Ramp	Westshore/Trask Off-Ramp	53.9	25.4	53.9	25.3	53.3	25.6	54.2	25.1	54.1	25.2	53.8	25.1	53.1	25.8	53.7	25.6	53.8	25.4	53.8	25.5	53.8	25.4
Westshore/Trask Off-Ramp	Lois On-Ramp	53.7	26.2	53.8	25.8	53.6	25.3	53.7	25.9	53.4	26.2	53.4	26.0	53.5	26.0	53.2	26.6	53.2	26.3	53.6	26.1	53.5	26.0
Lois On-Ramp	Memorial Off-Ramp	44.0	36.0	45.8	34.0	47.2	32.1	44.8	34.9	43.4	36.8	44.4	35.6	44.4	35.3	44.6	35.9	42.6	37.5	45.7	34.2	44.7	35.2
Memorial Off-Ramp	Memorial On-Ramp	55.2	18.0	56.9	17.2	55.8	17.3	55.8	17.6	55.9	17.8	55.6	17.7	56.2	17.1	54.8	18.3	56.0	17.7	56.6	17.2	55.9	17.6
Memorial On-Ramp	Kennedy On-Ramp	53.9	27.1	54.3	26.7	54.1	26.6	54.5	26.7	54.1	27.0	54.1	26.9	54.2	26.4	53.8	27.4	53.9	27.1	54.1	26.7	54.1	26.9
Kennedy On-Ramp	Howard Frankland Bridge	55.9	22.9	56.0	22.7	56.1	22.6	56.2	22.7	56.1	22.9	55.8	22.8	56.1	22.4	55.8	23.1	56.0	22.8	56.0	22.7	56.0	22.7
WEIGHTED AVERAGE CORRIDOR SPEED																						53.2	
EASTBOUND I-275																							
Howard Frankland Bridge	Kennedy/Memorial Off-Ramp	53.3	30.3	51.9	31.3	51.7	31.4	51.9	31.2	53.9	29.9	50.6	32.2	52.9	30.6	53.3	30.3	53.3	30.3	49.7	33.0	52.2	31.0
Kennedy/Memorial Off-Ramp	Memorial On-Ramp	53.4	24.8	54.2	23.9	53.7	24.0	53.7	24.1	54.5	24.0	53.5	23.6	54.0	23.8	54.3	23.8	53.7	24.5	53.6	23.8	53.9	24.0
Memorial On-Ramp	Lois Off-Ramp	48.5	31.8	49.1	31.2	48.5	31.4	48.4	31.5	48.8	31.4	48.7	31.0	48.2	31.5	48.2	31.6	47.9	32.0	48.4	31.2	48.5	31.4
Lois Off-Ramp	Westshore/Trask On-Ramp	48.5	35.3	49.1	34.6	48.9	34.5	48.4	35.2	48.9	34.7	49.1	34.1	48.8	34.5	48.7	34.9	48.8	34.8	47.9	35.3	48.7	34.8
Westshore/Trask On-Ramp	Dale Mabry Off-Ramp	46.3	35.0	48.5	33.2	48.3	33.1	47.8	33.6	47.9	33.6	48.2	32.8	47.0	34.0	47.2	34.1	46.4	34.8	44.4	36.1	47.2	34.0
Dale Mabry Off-Ramp	Lois On-Ramp	48.1	35.6	49.4	34.3	48.2	34.8	49.4	34.2	49.7	34.1	49.9	33.5	49.2	34.3	49.4	34.1	48.8	34.8	48.6	34.6	49.1	34.4
Lois On-Ramp	Dale Mabry On-Ramp	50.4	37.9	42.9	43.6	36.8	50.6	51.4	36.8	50.2	37.6	52.2	35.7	50.9	36.9	51.7	36.3	50.7	37.3	51.1	36.7	48.8	38.9
Dale Mabry On-Ramp	Himes On-Ramp	35.3	49.2	29.5	57.2	21.7	77.3	50.7	34.2	27.0	63.2	45.3	37.8	36.6	46.8	51.5	33.4	34.5	50.2	42.0	40.6	37.4	49.0
Himes On-Ramp	Armenia Off-Ramp	22.3	84.9	21.2	86.4	19.1	97.0	26.0	72.1	20.4	92.1	22.7	82.9	21.8	85.1	25.9	71.6	22.4	84.1	25.5	71.7	22.7	82.8
Armenia Off-Ramp	Howard On-Ramp	49.1	39.7	49.5	38.5	49.1	38.6	49.5	39.7	50.0	38.9	49.3	39.9	48.8	39.7	49.6	39.3	47.0	41.7	48.9	39.8	49.1	39.6
Howard On-Ramp	Ashley/Scott Off-Ramp	32.8	56.0	47.1	37.3	44.0	40.7	36.1	51.7	40.5	46.2	43.6	42.6	40.2	45.7	39.2	47.4	30.7	59.5	33.5	54.6	38.8	48.1
WEIGHTED AVERAGE CORRIDOR SPEED																						45.1	

Note: All speeds are in miles per hour. All densities are in vehicles per lane mile.
The 2015 P.M. peak hour volumes used in these simulations represent 85% of the unconstrained design hour volumes.

Three segments are projected to operate at Level of Service E in the westbound direction and these are as follows:

- I-275 between the Howard Avenue off-ramp and the Armenia Avenue on-ramp;
- I-275 between the Dale Mabry Highway off-ramp and the Cypress Street off-ramp; and
- I-275 between the Lois Avenue on-ramp and the Memorial Highway off-ramp.

Exhibit 68 indicates that a majority of the I-275 mainline is projected to operate at Level of Service E or better in the p.m. peak hour with 85.0 percent of the unconstrained 2015 design hour volumes. In the westbound direction, all of the I-275 mainline segments are projected to operate at Level of Service E or better and a majority of the mainline segments are projected to operate at Level of Service D or better. Three segments are projected to operate at Level of Service F in the eastbound direction and these are as follows:

- I-275 between the Dale Mabry Highway on-ramp and the Himes Avenue on-ramp;
- I-275 between the Himes Avenue on-ramp and the Armenia Avenue off-ramp; and
- I-275 between the Howard Avenue on-ramp and the Ashley Street/Scott Street off-ramp.

The average densities for these three segments range from 48.1 vehicles/lane-mile to 82.8 vehicles/lane-mile.

Although a comparison of the a.m. and p.m. peak hour measures of effectiveness indicate that the I-275 study corridor is projected to operate better in the a.m. peak hour than in the p.m. peak hour, it should be noted that the a.m. peak hour simulation results are based on 80.0 percent of the unconstrained 2015 design hour volumes while the p.m. peak hour simulation results are based on 85.0 percent of the unconstrained 2015 design hour volumes. The additional 5.0 percent of the unconstrained 2015 design hour volumes in the p.m. peak hour would be expected to lower the operating conditions on I-275.

The results of the CORSIM analyses indicate that the proposed improvements are expected to provide improved operations on I-275. Based on a comparison of the a.m. peak hour mainline densities and levels of service depicted on Exhibits 21 and 67, the following observations can be made:

- With one exception, the vehicle densities on westbound I-275 are projected to be lower in the Year 2015 than the current densities. (The one exception is projected to occur between the Westshore Boulevard off-ramp and the Memorial Highway off-ramp.)

- The portion of westbound I-275 between the Armenia Avenue on-ramp and the Lois Avenue on-ramp that is currently operating at Level of Service F is projected to operate at Level of Service E or better in the Year 2015. In addition, the portions between the Armenia Avenue on-ramp and the Dale Mabry Highway off-ramp and between the Dale Mabry Highway on-ramp and the Westshore Boulevard/Trask Street off-ramp are projected to operate at Level of Service D.
- The vehicle densities on eastbound I-275 are projected to be lower in the Year 2015 than the current densities.
- The portions of eastbound I-275 between the Lois Avenue on-ramp and the Dale Mabry Highway on-ramp and between the Himes Avenue on-ramp and the Ashley Street/Scott Street off-ramp that are currently operating at Level of Service F are projected to operate at Level of Service E or better in the year 2015.

A similar comparison of the p.m. peak hour mainline densities and levels of service depicted on Exhibits 22 and 68 reveals the following:

- The vehicle densities on westbound I-275 between the Howard Avenue off-ramp and the Kennedy Boulevard on-ramp are projected to be significantly lower in the Year 2015 than the current densities.
- The portion of westbound I-275 between the Armenia Avenue on-ramp and the Kennedy Boulevard on-ramp that is currently operating at Level of Service F is projected to operate at Level of Service E or better in the Year 2015.

Table 29 provides a comparison of the existing (1998) and future year (2015) peak hour average corridor travel speeds. The existing average peak hour travel speeds range from 27.8 miles/hour to 34.1 miles/hour while the 2015 average peak hour travel speeds are projected to range from 45.1 miles/hour to 53.2 miles/hour. As indicated in Table 29, the I-275 improvements are expected to result in a significant increase in peak hour travel speeds for both travel directions.

TABLE 29
AVERAGE I-275 CORRIDOR TRAVEL SPEED COMPARISON
I-275 Systems Interchange Modification Report

Travel Direction	Actual (1998)		Estimated (2015)	
	AM Peak Hour Speed (miles/hour)	PM Peak Hour Speed (miles/hour)	AM Peak Hour Speed (miles/hour)	PM Peak Hour Speed (miles/hour)
Westbound	34.1	31.3	53.1	53.2
Eastbound	31.0	27.8	50.8	45.1

Although the simulation results summarized in Tables 27 and 28 and on Exhibits 67 and 68 do not represent the I-275 mainline operations that would be expected to occur during the 30th highest hour in the Year 2015 (since the simulations were conducted using 80.0 percent and 85.0 percent of the 2015 design hour volumes), it should be noted that the “constraint” on the 2015 simulations is not the capacity on mainline I-275 but rather the capacity at the adjacent cross street intersections. In addition, it should be noted that the 2015 peak hour volumes included in the final simulations are significantly higher than the existing a.m. and p.m. peak hour volumes. The volumes included in the 2015 a.m. peak hour simulation between Memorial Highway and Ashley Street are on average approximately 46.5 percent higher than the existing a.m. peak hour volumes. The volumes included in the 2015 p.m. peak hour simulation between Memorial Highway and Ashley Street are on average approximately 65.0 percent higher than the existing p.m. peak hour volumes.

4.3 SUMMARY

The results of the traffic analysis conducted for this SIMR indicate that although I-275 is projected to operate over capacity in the future with the proposed improvements, the mainline operations will be significantly better with the improvements than without. By the year 2025, a majority of the existing I-275 mainline is projected to operate with v/c ratios ranging between 1.34 and 1.69. If the proposed improvements are implemented, a majority of the existing I-275 mainline is projected to operate with v/c ratios ranging between 1.03 and 1.26 by the year 2025. Several existing adjacent cross street intersections on Cypress Street are not projected to be able to accommodate the 30th highest hourly volumes in the Year 2015 and as a result, these intersections are projected to experience queuing problems which could have a negative impact on the Interstate system. The incremental simulation analyses conducted as a part of this study indicate that the proposed improvements are projected to improve the existing levels of service throughout a majority of the study corridor at the 2015 peak hour volume levels that can be accommodated at the existing adjacent cross street intersections.

Section 5.0

SUMMARY

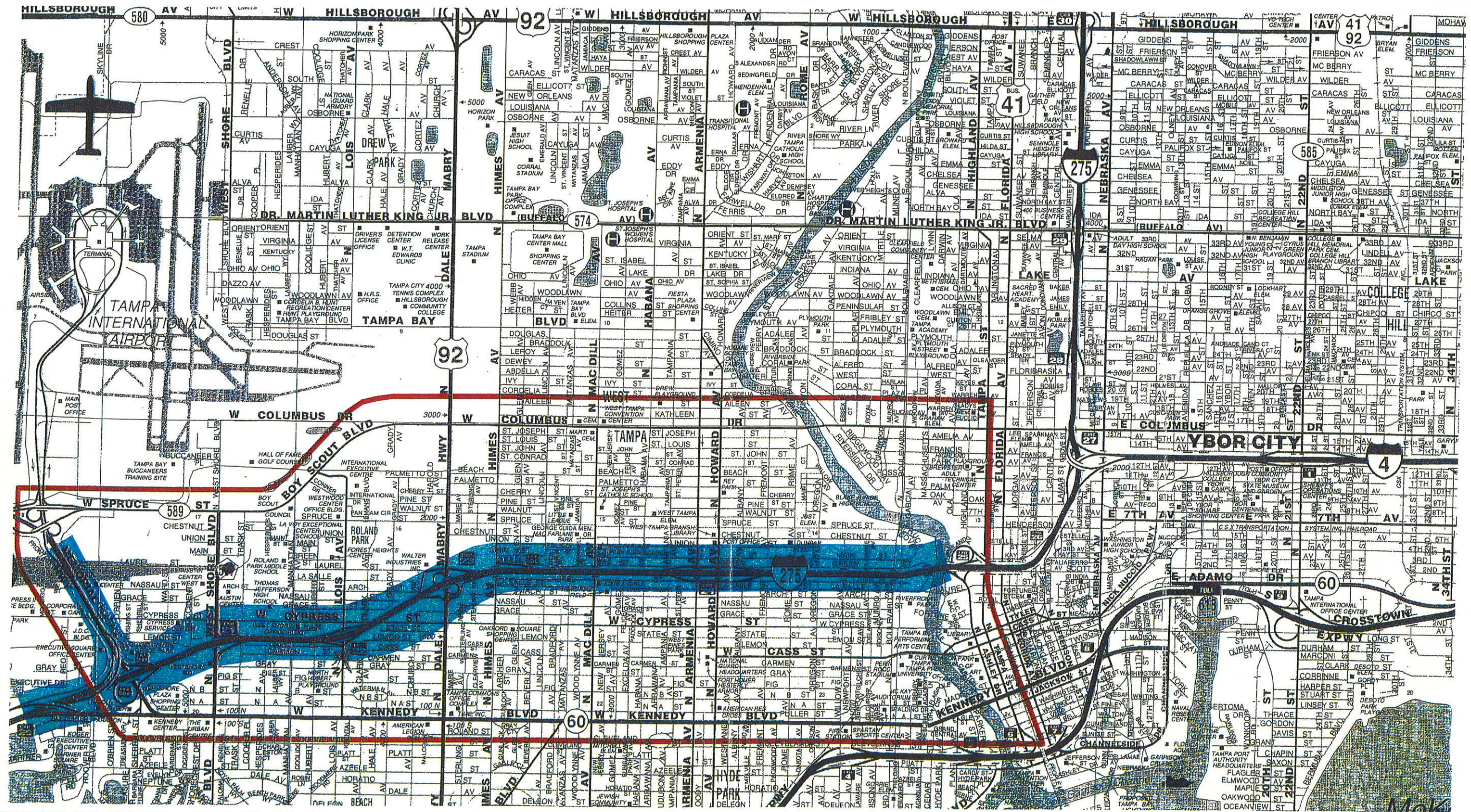
Currently, the portion of I-275 in Hillsborough County from the Howard Frankland Bridge to the Ashley Street interchange is experiencing high levels of congestion in both travel directions during both peak hours. These high levels of congestion result in stop-and-go traffic flow, which in turn, results in low travel speeds throughout most of the corridor. A majority of the corridor is experiencing peak period vehicle densities that are representative of Level of Service F operations. These high levels of congestion coupled with the existing mainline and interchange ramp geometrics contribute to the large number of crashes that regularly occur along the corridor on a yearly basis.

The Florida Department of Transportation (FDOT) District Seven is requesting approval for specific geometric modifications to this portion of I-275 in Hillsborough County. The need for improvements to I-275 has been endorsed by the Hillsborough County Metropolitan Planning Organization (MPO) and the recommended improvements are currently included in the MPO's adopted Year 2020 Financially Feasible Long Range Transportation Plan and in the FDOT's Year 2020 Florida Intrastate Highway System (FIHS) Financially Feasible Plan. The recommended improvements documented in this SIMR constitute a portion of the ultimate improvements that are contained within the Final Environmental Impact Statement (FEIS) prepared for the Tampa Interstate Study and approved by the FHWA. Consequently, the proposed improvements documented in this SIMR are consistent with the FEIS. The proposed improvements are also consistent with the Hillsborough County and City of Tampa's Comprehensive Plans.

The results of the traffic analysis conducted for this SIMR indicate that the recommended improvements are expected to provide improved traffic operations throughout the I-275 corridor commensurate with the magnitude of the future year volumes projected to travel on I-275. Although a majority of the corridor is projected to operate with v/c ratios greater than 1.00 by the year 2015 with the proposed improvements, these improvements constitute the financially feasible portion of the ultimate improvements documented previously in the FHWA approved FEIS. The additional capacity that will be needed to accommodate the future year travel demand will be provided via the implementation of the express freeway component of the ultimate Tampa Interstate Study improvements. Based on the current FDOT District Seven funding plan, the implementation of this express freeway system is not anticipated to occur until after the Year 2020.

The recommended improvements are projected to improve the existing mainline densities, travel speeds, and levels of service throughout a majority of the I-275 study corridor while at the same time accommodating a significant increase in mainline peak hour traffic volumes. The recommended improvements will reduce the number of local trips made via I-275 and hence, increase the number of long distance trips that can be made on I-275 by physically prohibiting the movements between Westshore Boulevard and Lois Avenue and between Lois Avenue and Dale Mabry Highway. The recommended improvements are also expected to significantly increase the overall safety in the study corridor. The increase in safety will be accomplished with the improved geometric design elements including improved mainline vertical alignment, shoulder widths, ramp lengths, and ramp acceleration/deceleration lane lengths.

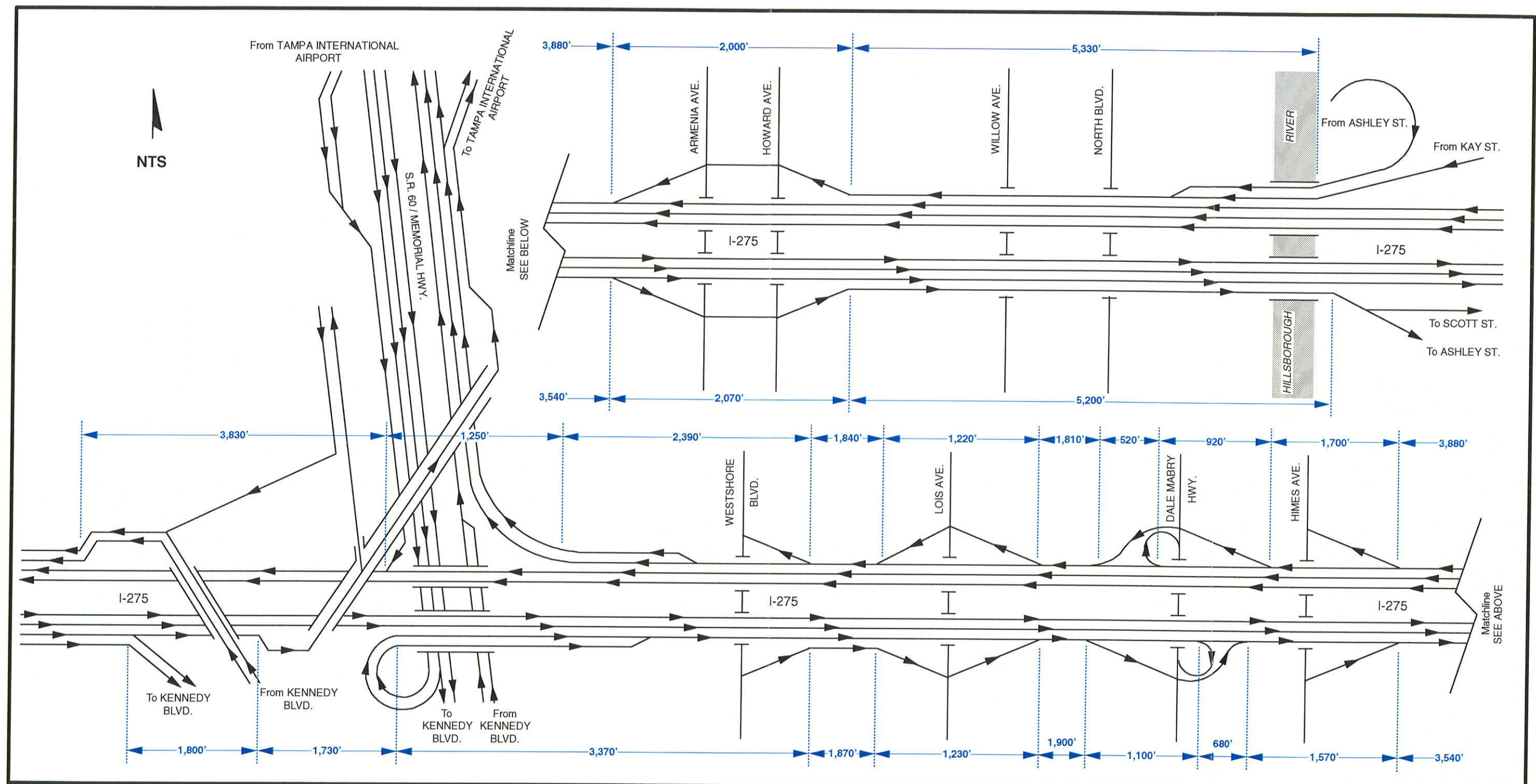
Based on the information provided in this SIMR, it is recommended that the proposed improvements be approved. These improvements are vital to alleviating the current undesirable operating conditions on this portion of I-275 in Hillsborough County.



LEGEND

- - SIMR Area of Influence
- - Project Corridor

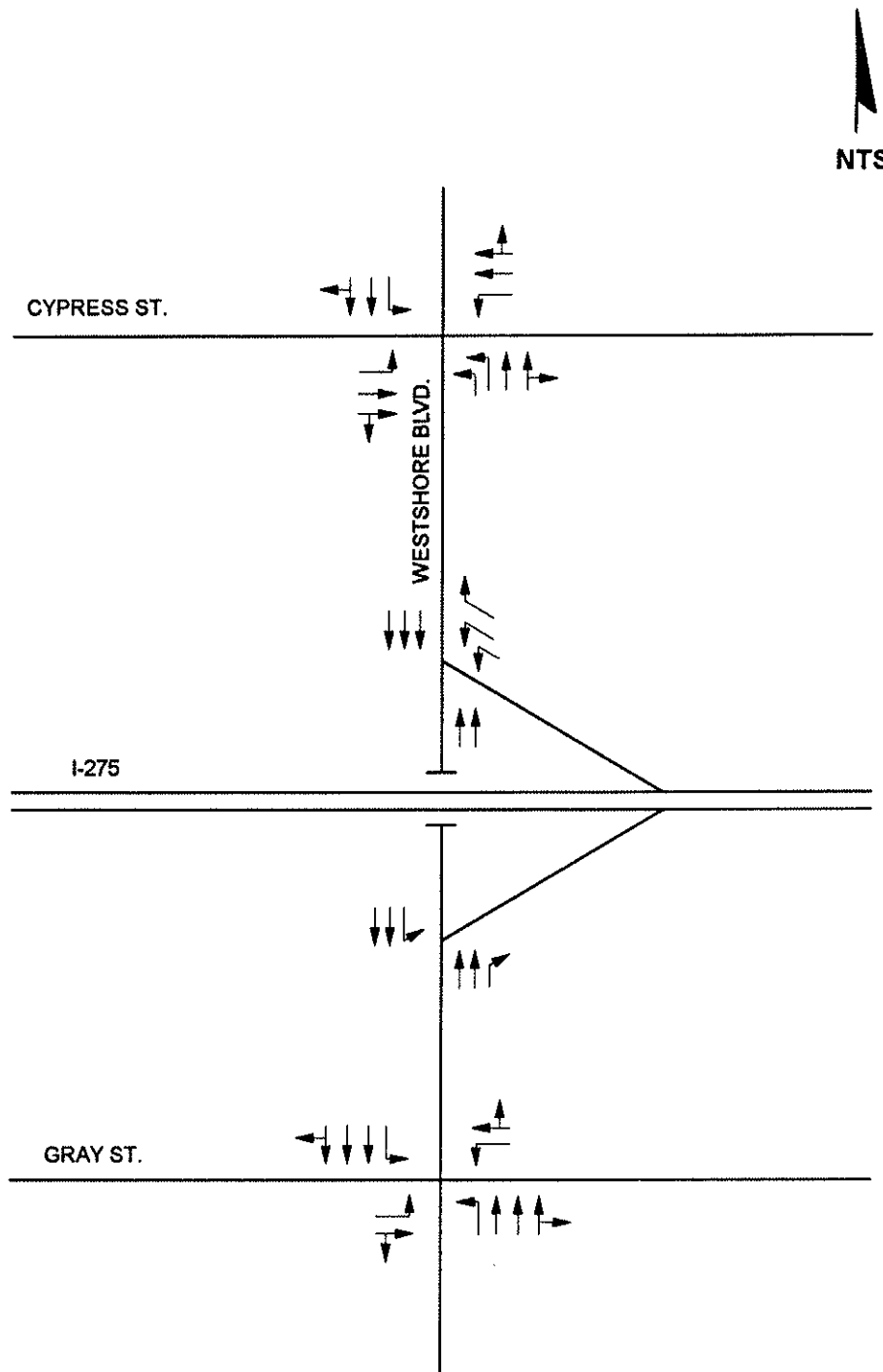
I-275 SIMR
Hillsborough County, Florida
**PROJECT LOCATION MAP
AND AREA OF INFLUENCE**
FLORIDA DEPARTMENT OF TRANSPORTATION



I-275 SIMR
Hillsborough County, Florida
EXISTING I-275
LANE LINE DIAGRAM

EXHIBIT 2

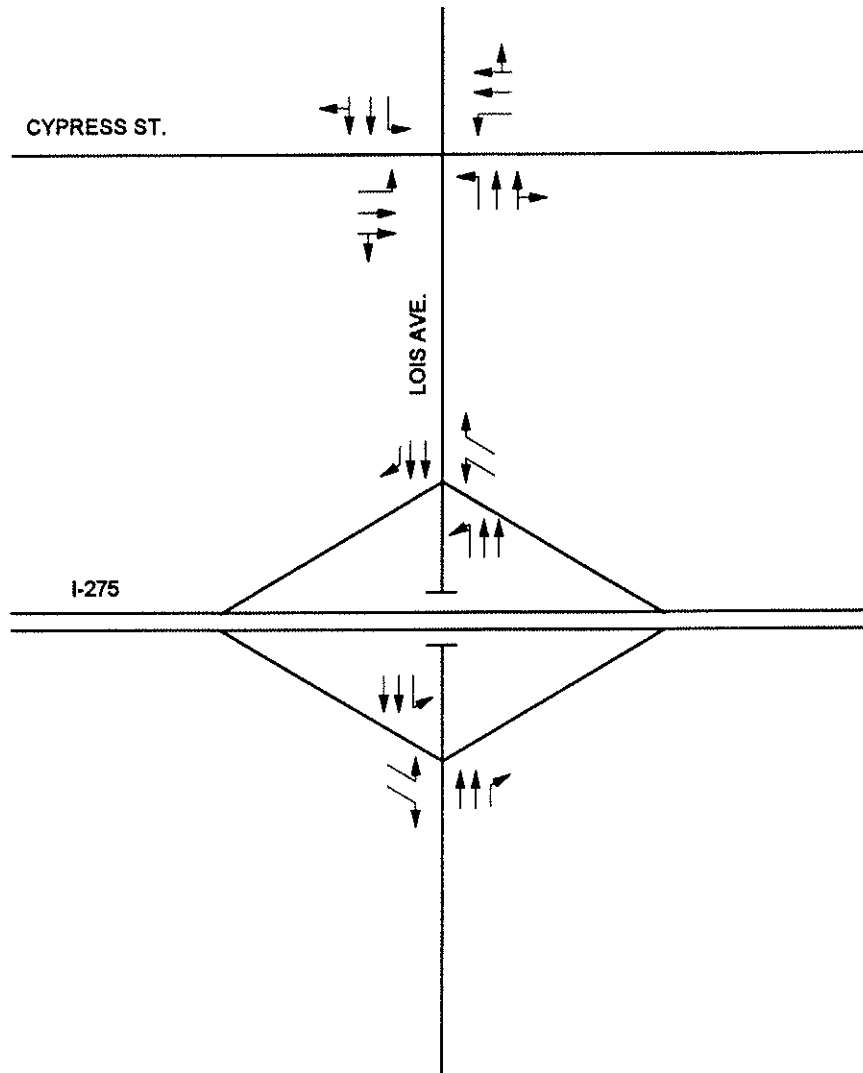
FLORIDA DEPARTMENT OF TRANSPORTATION



I-275 SIMR
Hillsborough County, Florida
**WESTSHORE BOULEVARD
EXISTING INTERSECTION
GEOMETRY**

EXHIBIT 3

FLORIDA DEPARTMENT OF TRANSPORTATION

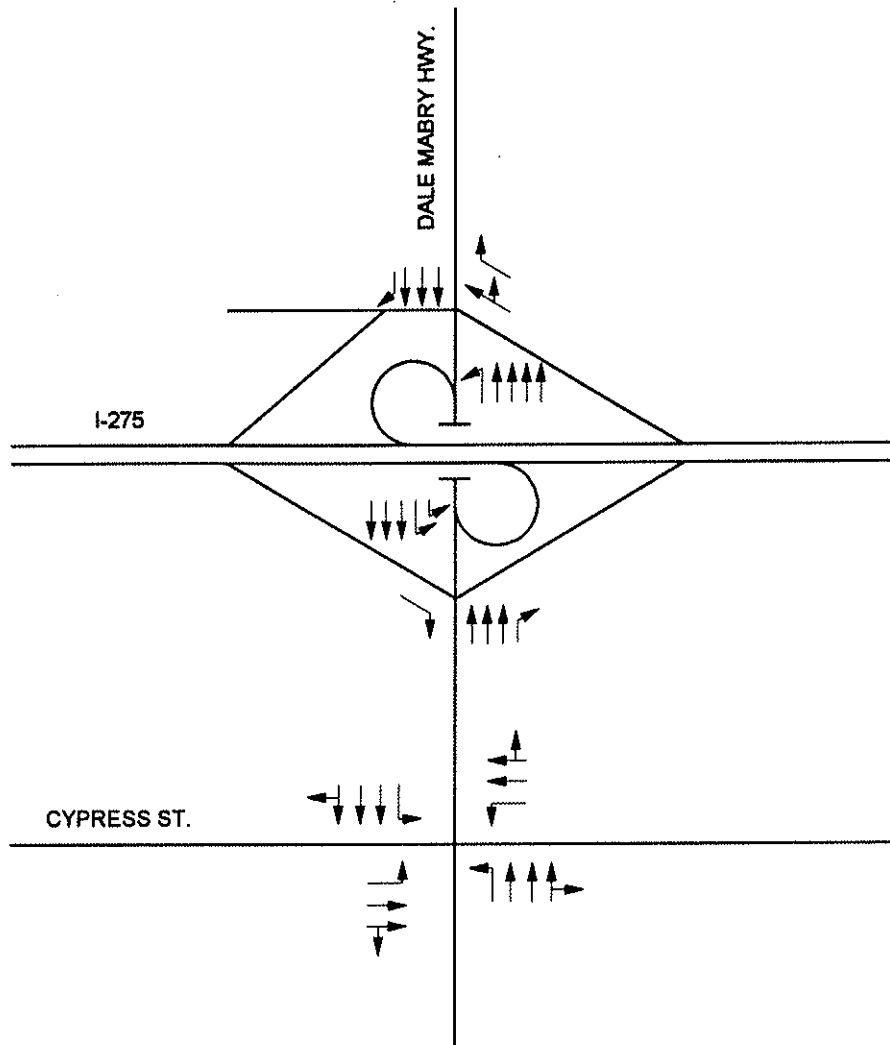


I-275 SIMR
Hillsborough County, Florida

**LOIS AVENUE
EXISTING INTERSECTION
GEOMETRY**

EXHIBIT 4

FLORIDA DEPARTMENT OF TRANSPORTATION



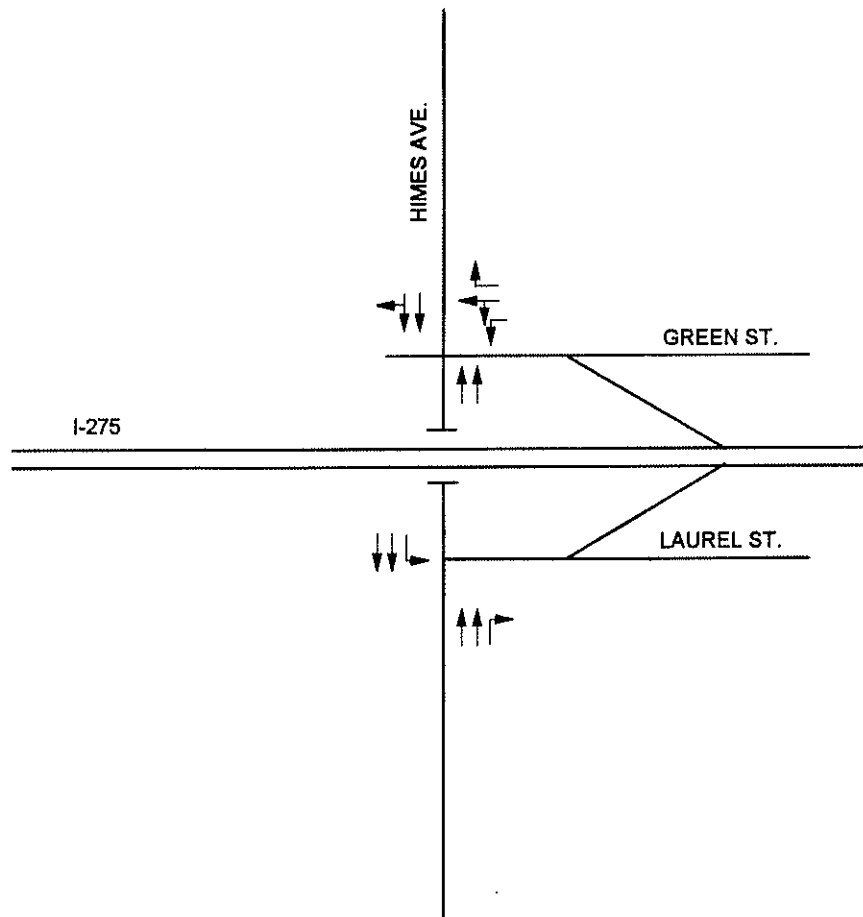
I-275 SIMR

Hillsborough County, Florida

**DALE MABRY HIGHWAY
EXISTING INTERSECTION
GEOMETRY**

EXHIBIT 5

FLORIDA DEPARTMENT OF TRANSPORTATION

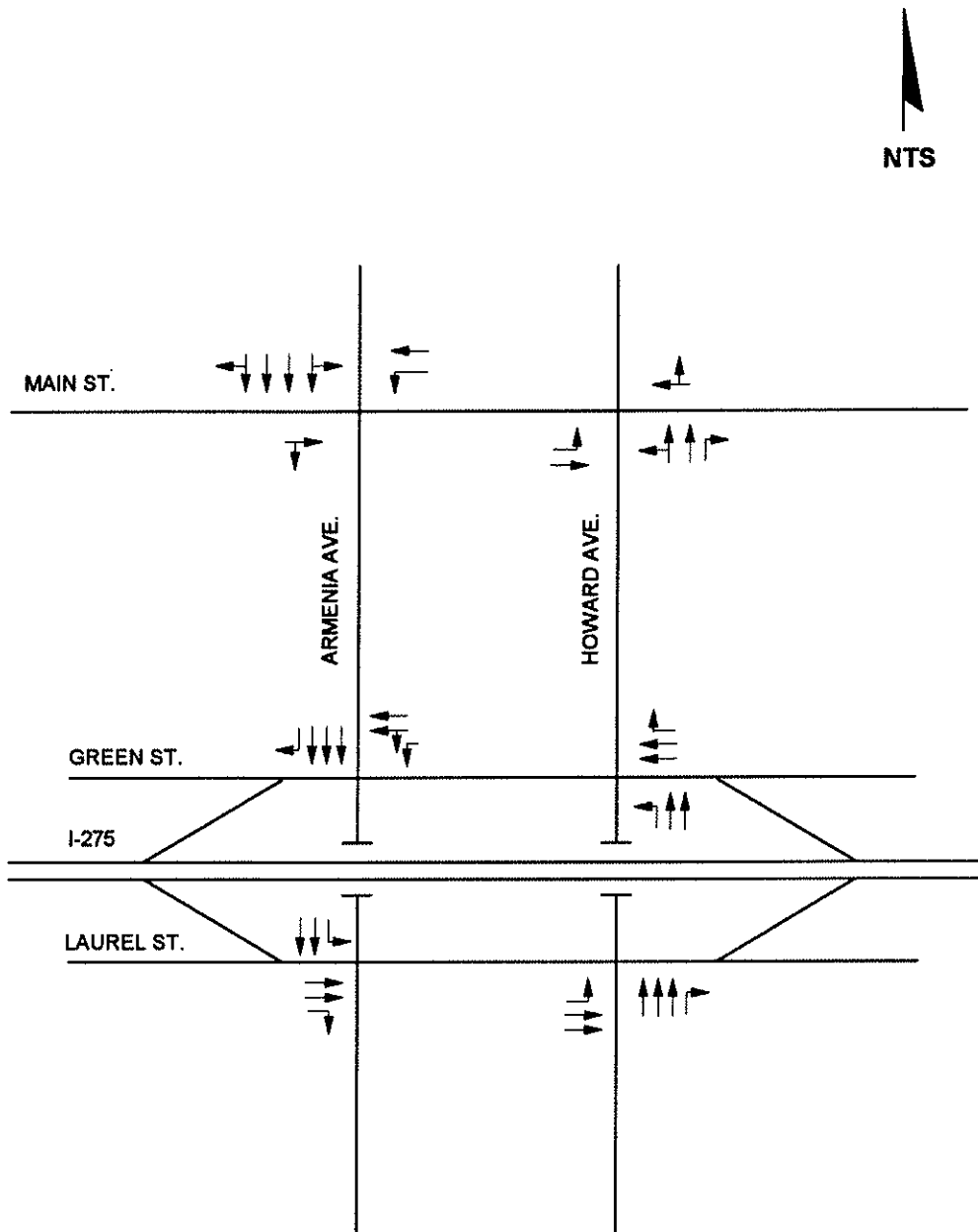


I-275 SIMR
Hillsborough County, Florida

**HIMES AVENUE
EXISTING INTERSECTION
GEOMETRY**

EXHIBIT 6

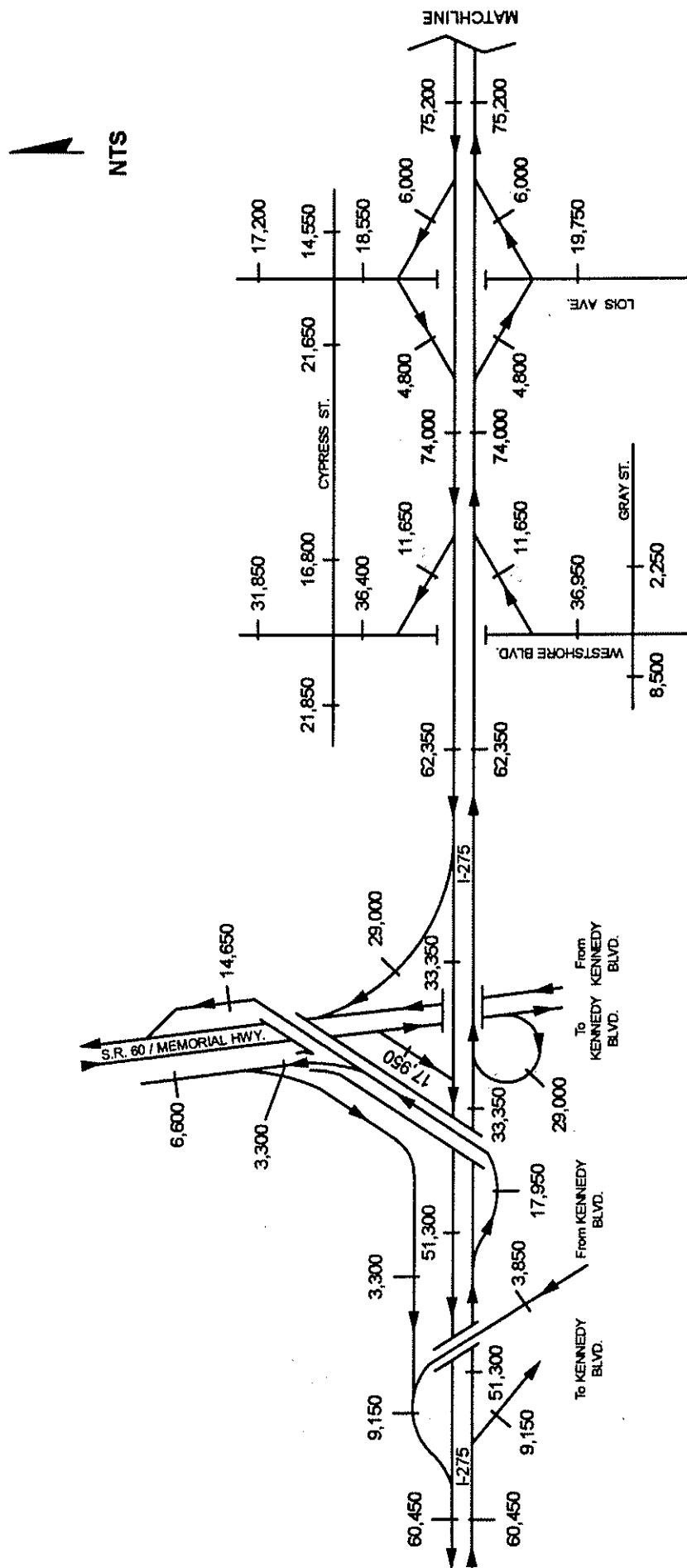
FLORIDA DEPARTMENT OF TRANSPORTATION



I-275 SIMR
Hillsborough County, Florida
**ARMENIA / HOWARD AVENUE
EXISTING INTERSECTION
GEOMETRY**

EXHIBIT 7

FLORIDA DEPARTMENT OF TRANSPORTATION



I-275 SIMR

Hillsborough County, Florida

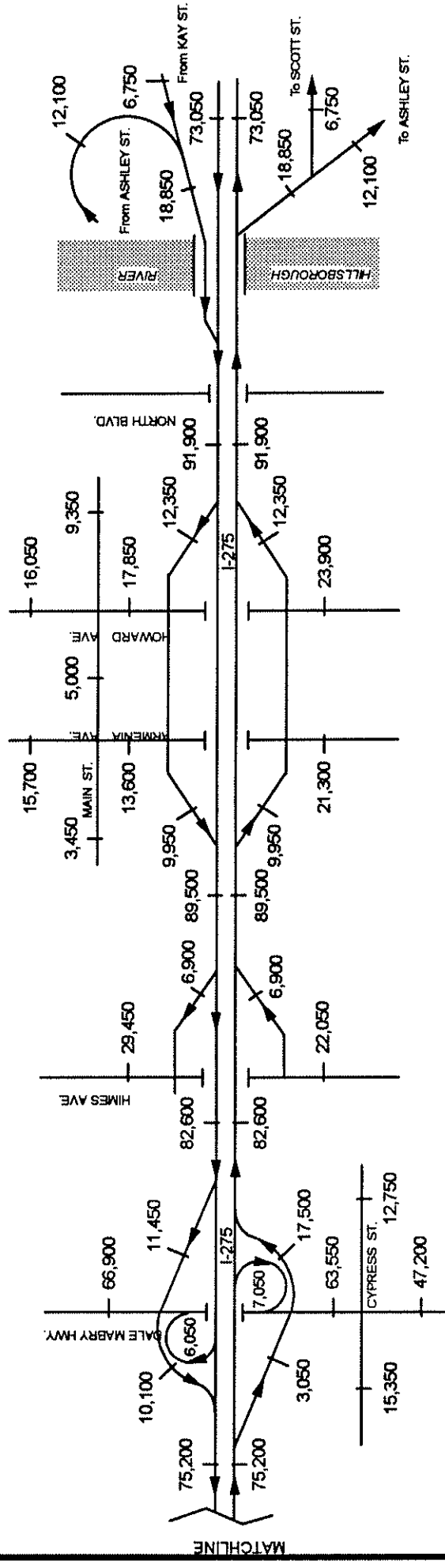
**EXISTING (1998) AVERAGE ANNUAL
DAILY TRAFFIC VOLUMES**

FLORIDA DEPARTMENT OF TRANSPORTATION

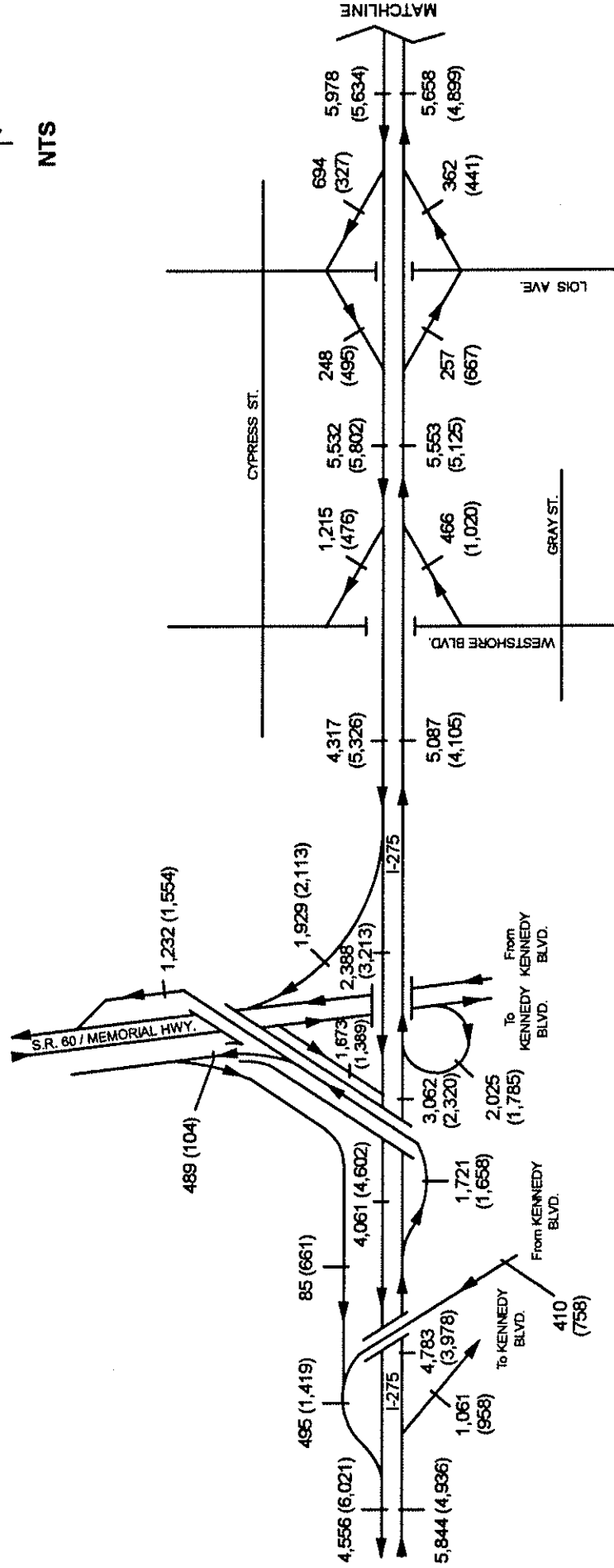
EXHIBIT 8A



NTS

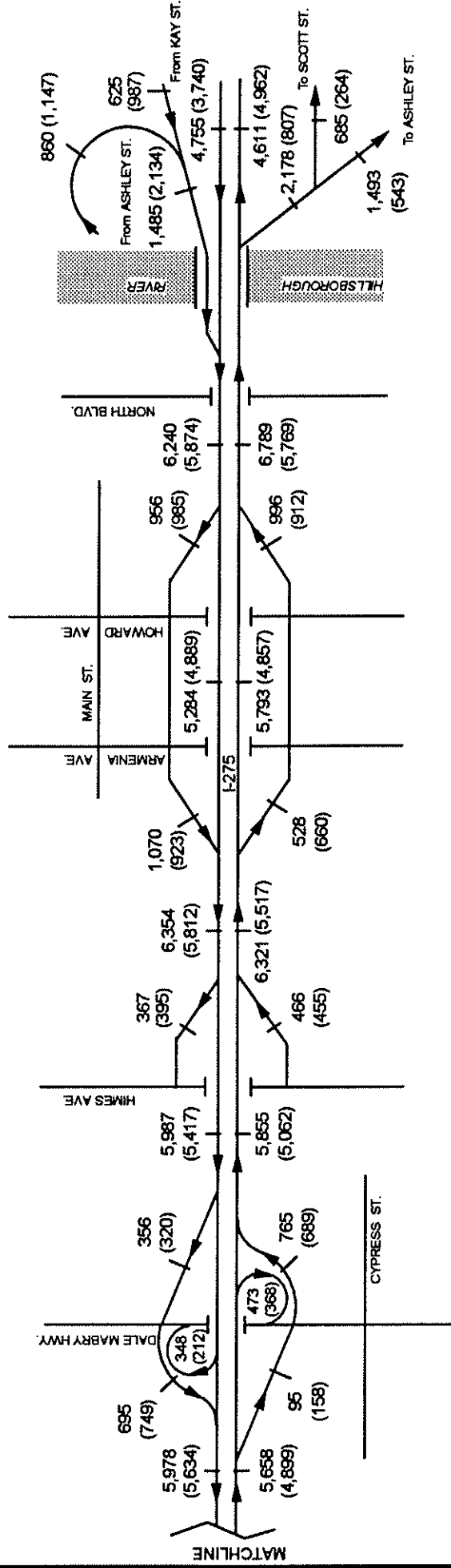


I-275 SIMR
Hillsborough County, Florida
**EXISTING (1998) AVERAGE ANNUAL
DAILY TRAFFIC VOLUMES**
FLORIDA DEPARTMENT OF TRANSPORTATION



I-275 SIMR
 Hillsborough County, Florida
EXISTING (1998) I-275
PEAK HOUR VOLUMES
 FLORIDA DEPARTMENT OF TRANSPORTATION

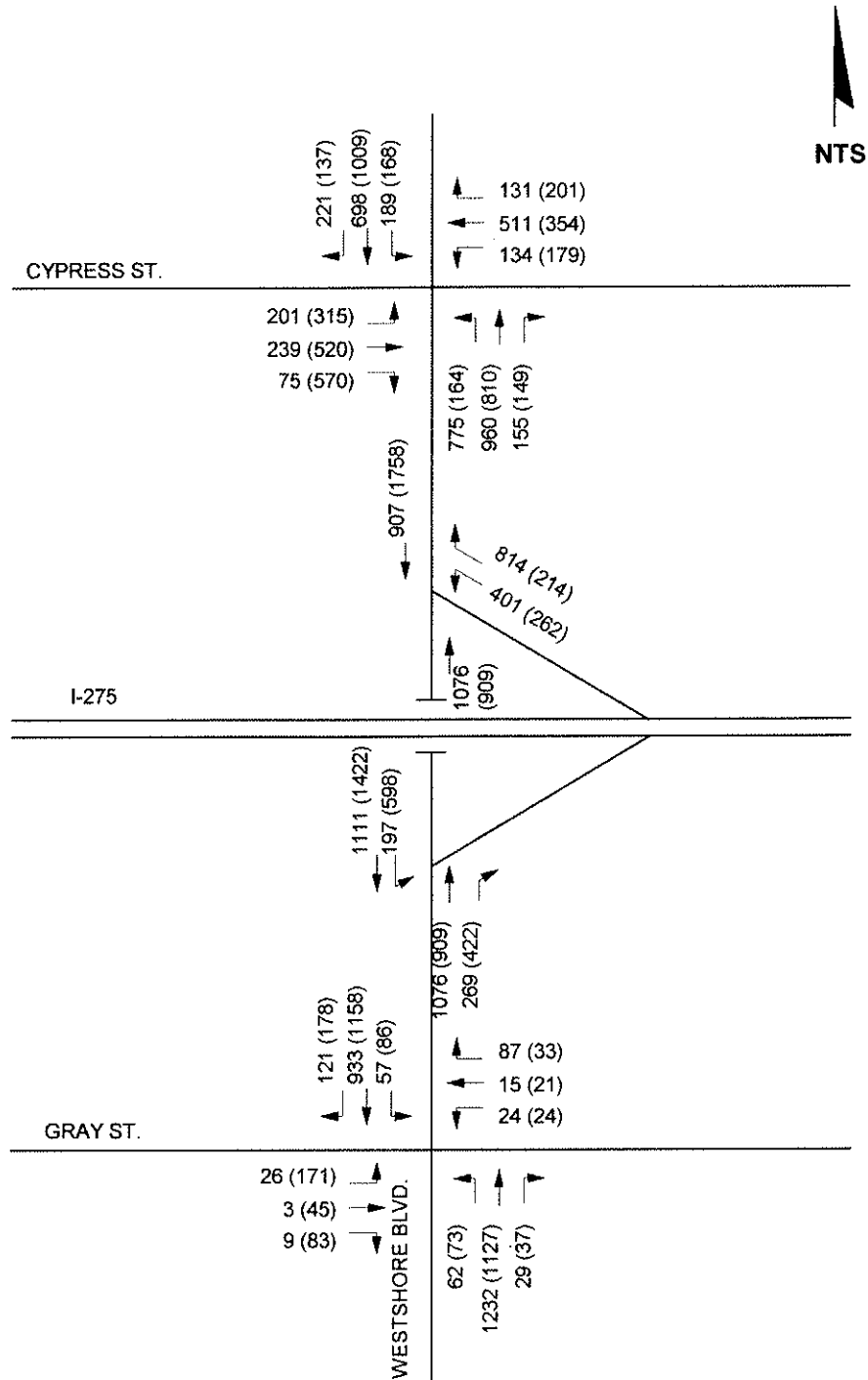
LEGEND
 5,553 (5,125) - AM Peak Hour (PM Peak Hour) Volume



I-275 SIMR
Hillsborough County, Florida
EXISTING (1998) I-275
PEAK HOUR VOLUMES
FLORIDA DEPARTMENT OF TRANSPORTATION

LEGEND

5,855 (5,062) - AM Peak Hour (PM Peak Hour) Volume

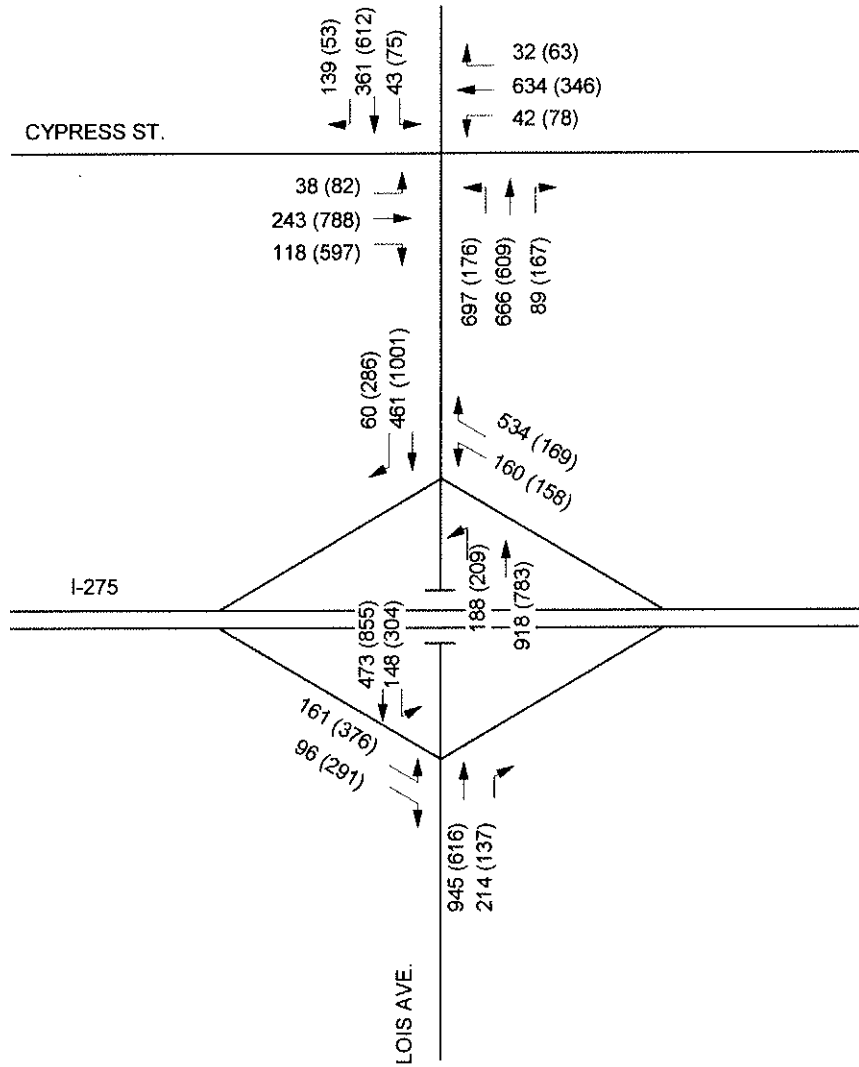


LEGEND

26 - AM Peak Hour Volume
(171) - PM Peak Hour Volume

I-275 SIMR
Hillsborough County, Florida
EXISTING (1998)
PEAK HOUR VOLUMES
I-275 AT WESTSHORE BLVD.

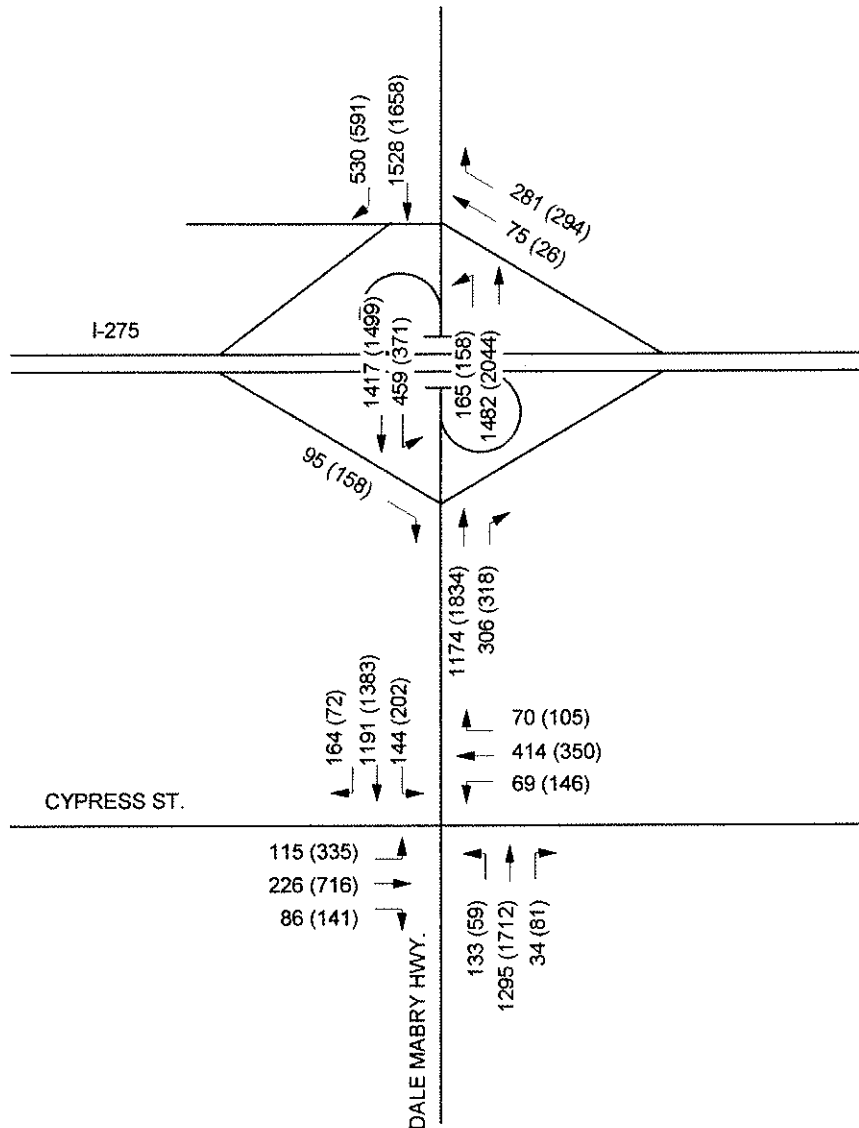
FLORIDA DEPARTMENT OF TRANSPORTATION



LEGEND

26 - AM Peak Hour Volume
(171) - PM Peak Hour Volume

I-275 SIMR
Hillsborough County, Florida
**EXISTING (1998)
PEAK HOUR VOLUMES
I-275 AT LOIS AVE.**

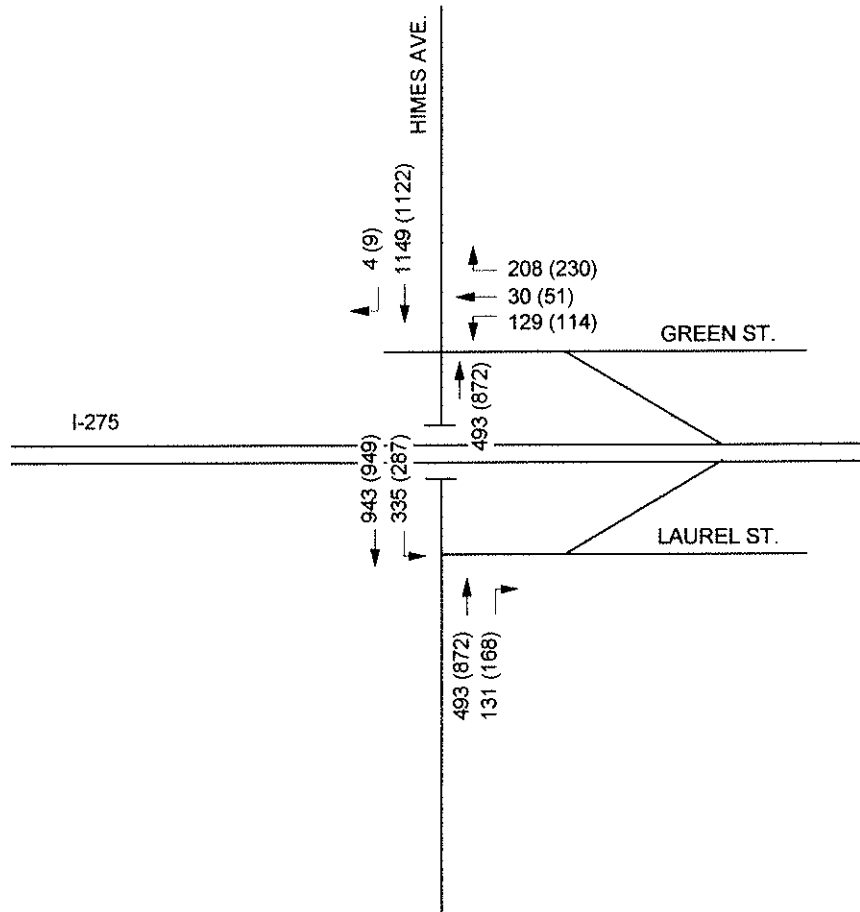


LEGEND

26 - AM Peak Hour Volume
(171) - PM Peak Hour Volume

I-275 SIMR
Hillsborough County, Florida
EXISTING (1998)
PEAK HOUR VOLUMES
I-275 AT DALE MABRY HWY.

FLORIDA DEPARTMENT OF TRANSPORTATION



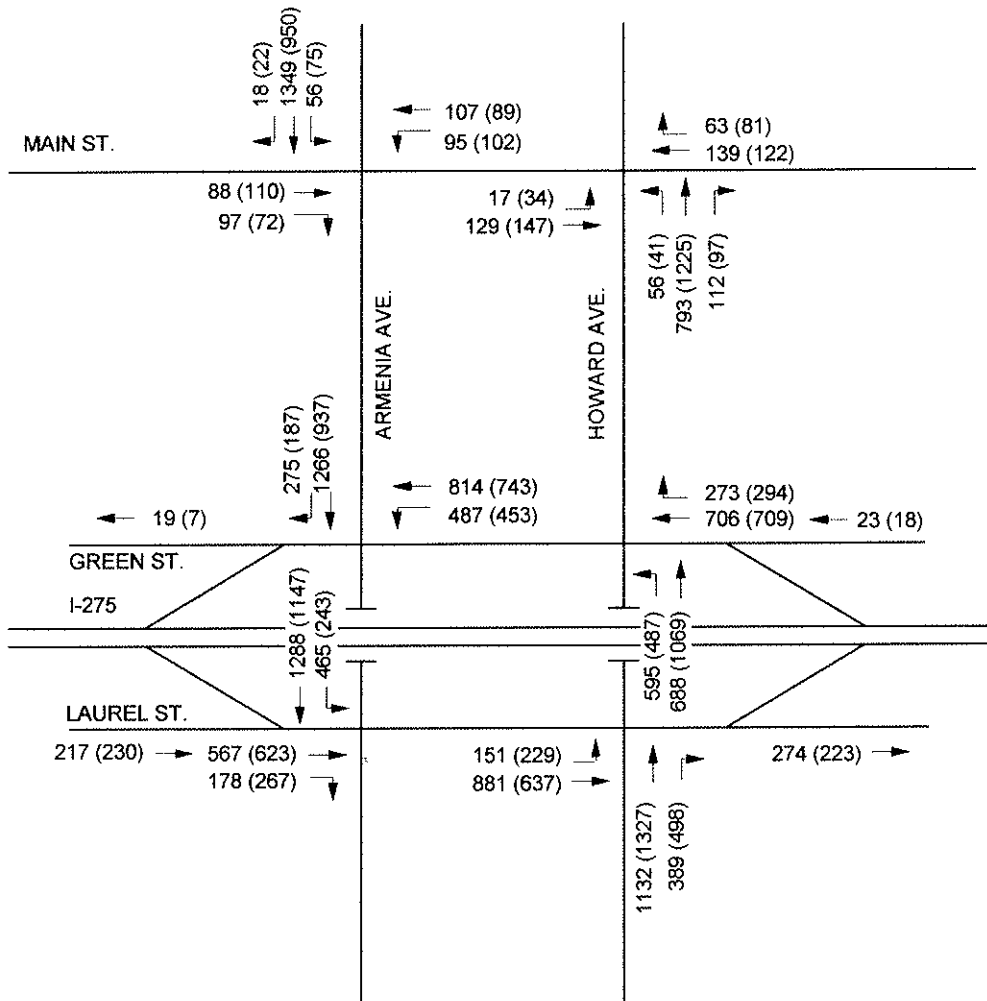
LEGEND

26 - AM Peak Hour Volume
(171) - PM Peak Hour Volume

I-275 SIMR
Hillsborough County, Florida
**EXISTING (1998)
PEAK HOUR VOLUMES
I-275 AT HIMES AVE.**

FLORIDA DEPARTMENT OF TRANSPORTATION

NTS



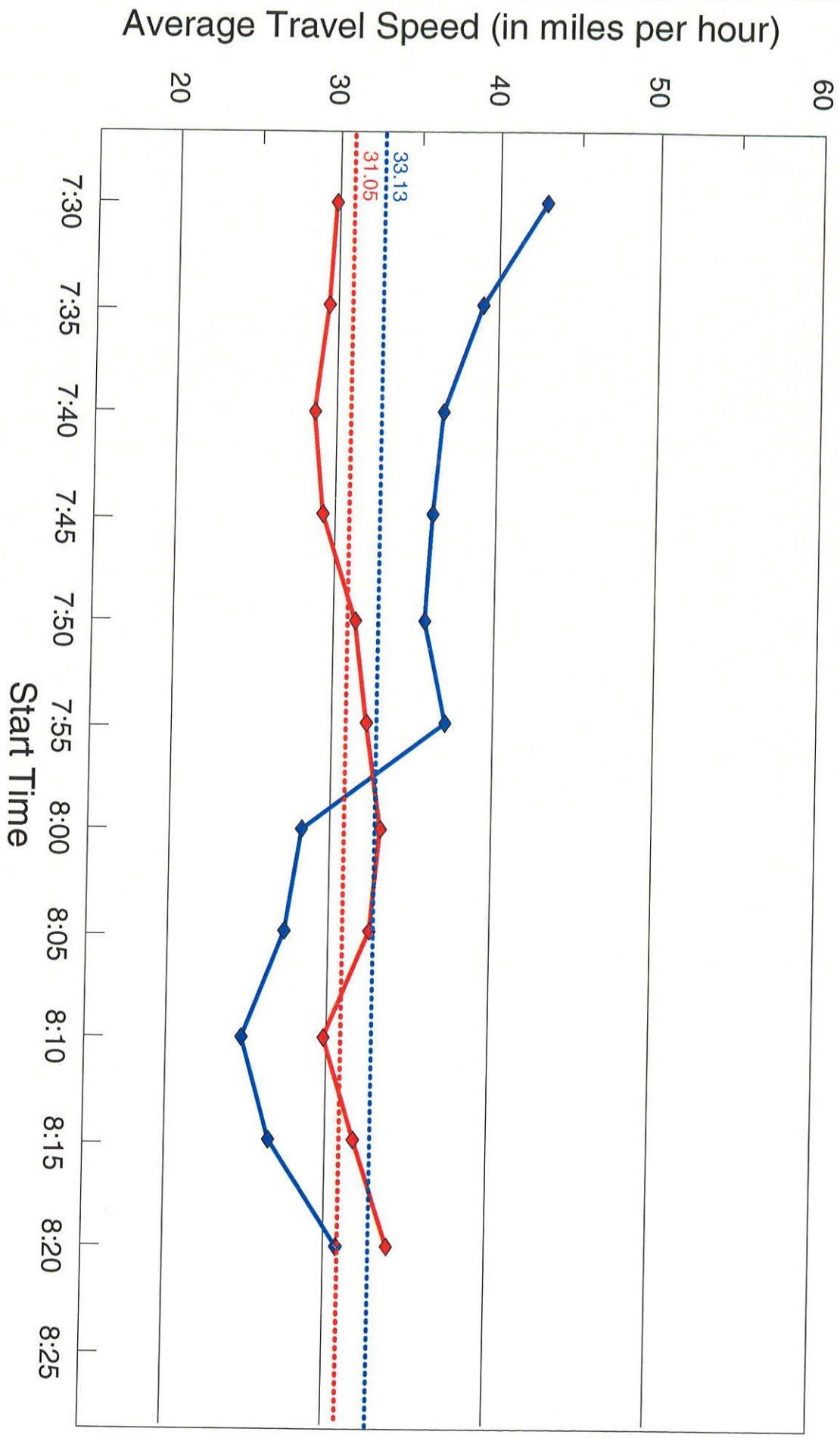
LEGEND

26 - AM Peak Hour Volume
(171) - PM Peak Hour Volume

I-275 SIMR
Hillsborough County, Florida
**EXISTING (1998)
PEAK HOUR VOLUMES
I-275 AT ARMENIA / HOWARD AVE.**

FLORIDA DEPARTMENT OF TRANSPORTATION

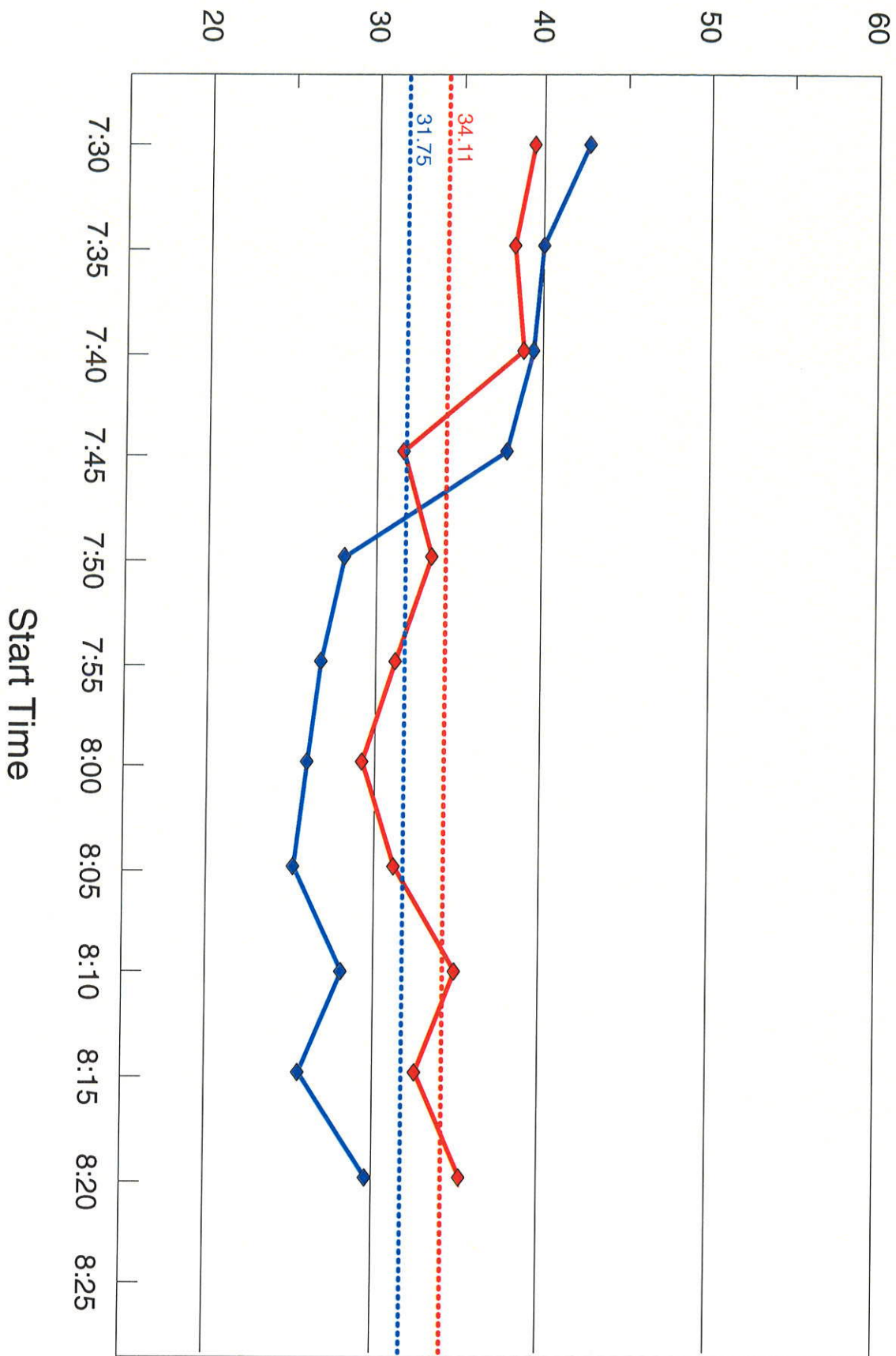
EXHIBIT 14



LEGEND

- Model Estimate
- Field Observation
- Overall Average (Based on CORSIM Model)
- Overall Average (Based on Field Observations)

Average Travel Speed (in miles per hour)



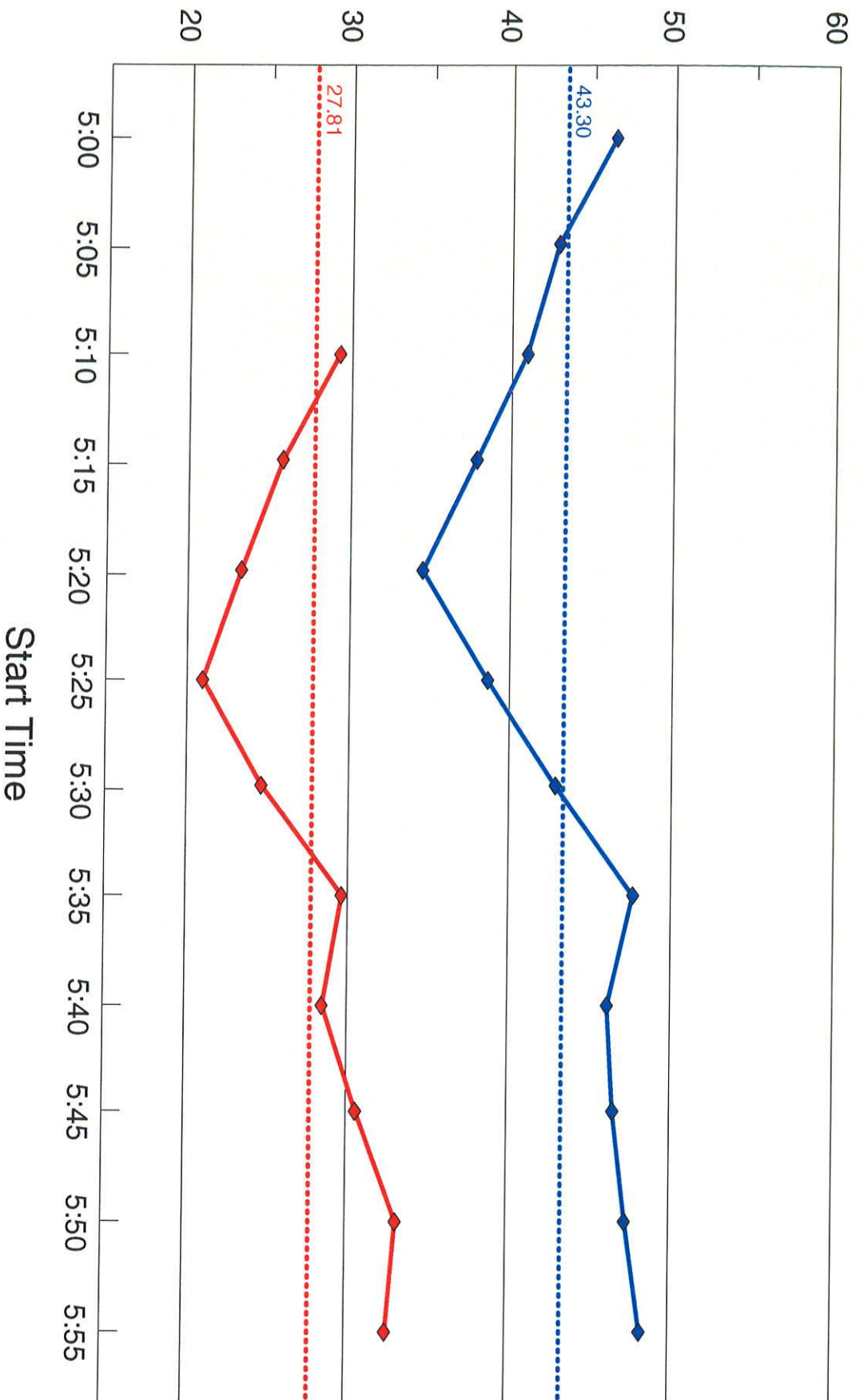
LEGEND

- Model Estimate
- Field Observation
- Overall Average (Based on CORSIM Model)
- Overall Average (Based on Field Observations)

EXHIBIT 16

I-275 SIMR
Hillsborough County, Florida
AM PEAK HOUR
TRAVEL SPEED COMPARISON
WESTBOUND I-275
FLORIDA DEPARTMENT OF TRANSPORTATION

Average Travel Speed (in miles per hour)

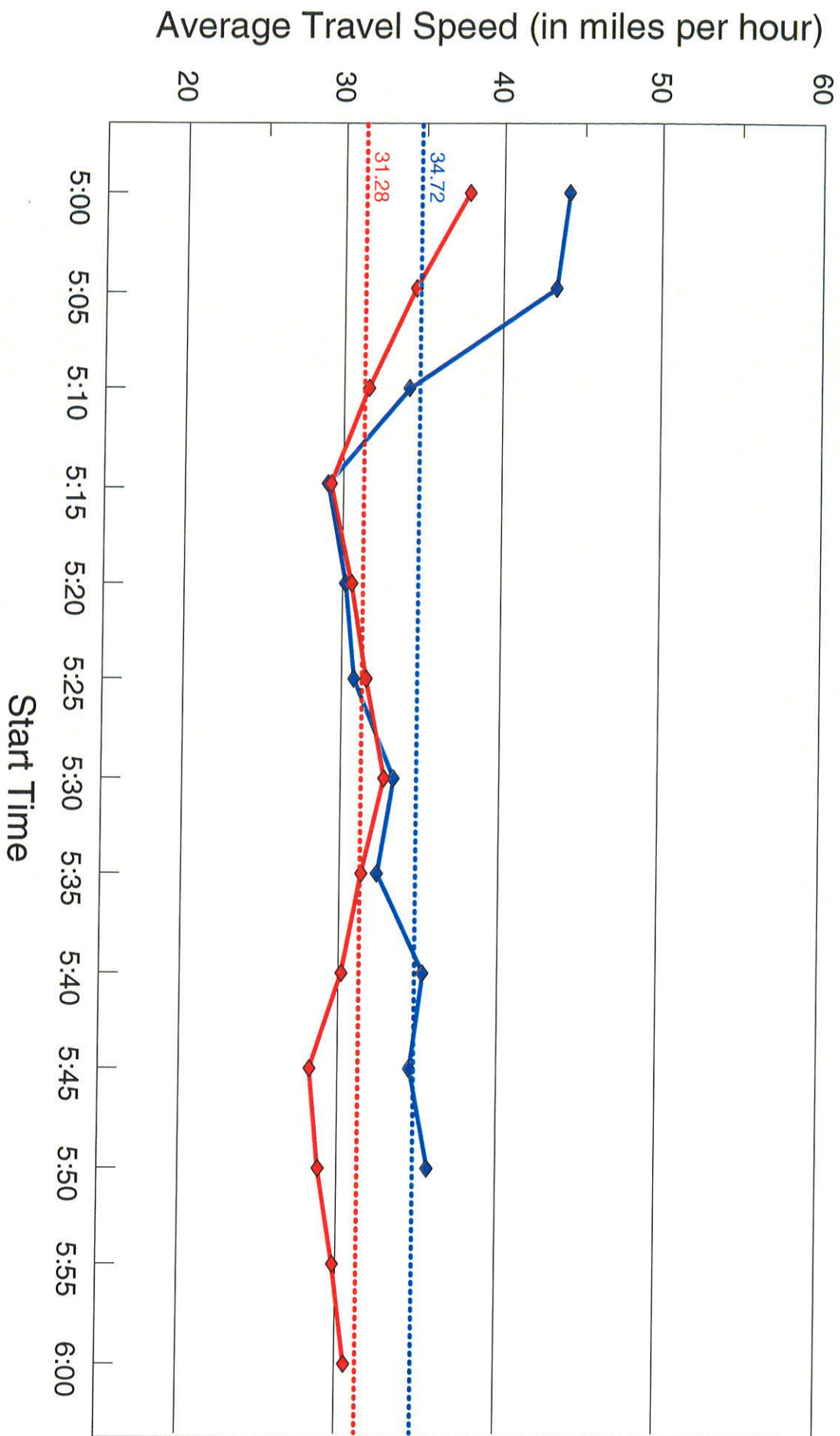


LEGEND

- Model Estimate
- Field Observation
- Overall Average (Based on CORSIM Model)
- Overall Average (Based on Field Observations)

EXHIBIT 17

I-275 SIMR
Hillsborough County, Florida
PM PEAK HOUR
TRAVEL SPEED COMPARISON
EASTBOUND I-275
FLORIDA DEPARTMENT OF TRANSPORTATION



LEGEND

- Model Estimate
- Field Observation
- Overall Average (Based on CORSIM Model)
- Overall Average (Based on Field Observations)

I-275 SIMR

Hillsborough County, Florida

PM PEAK HOUR

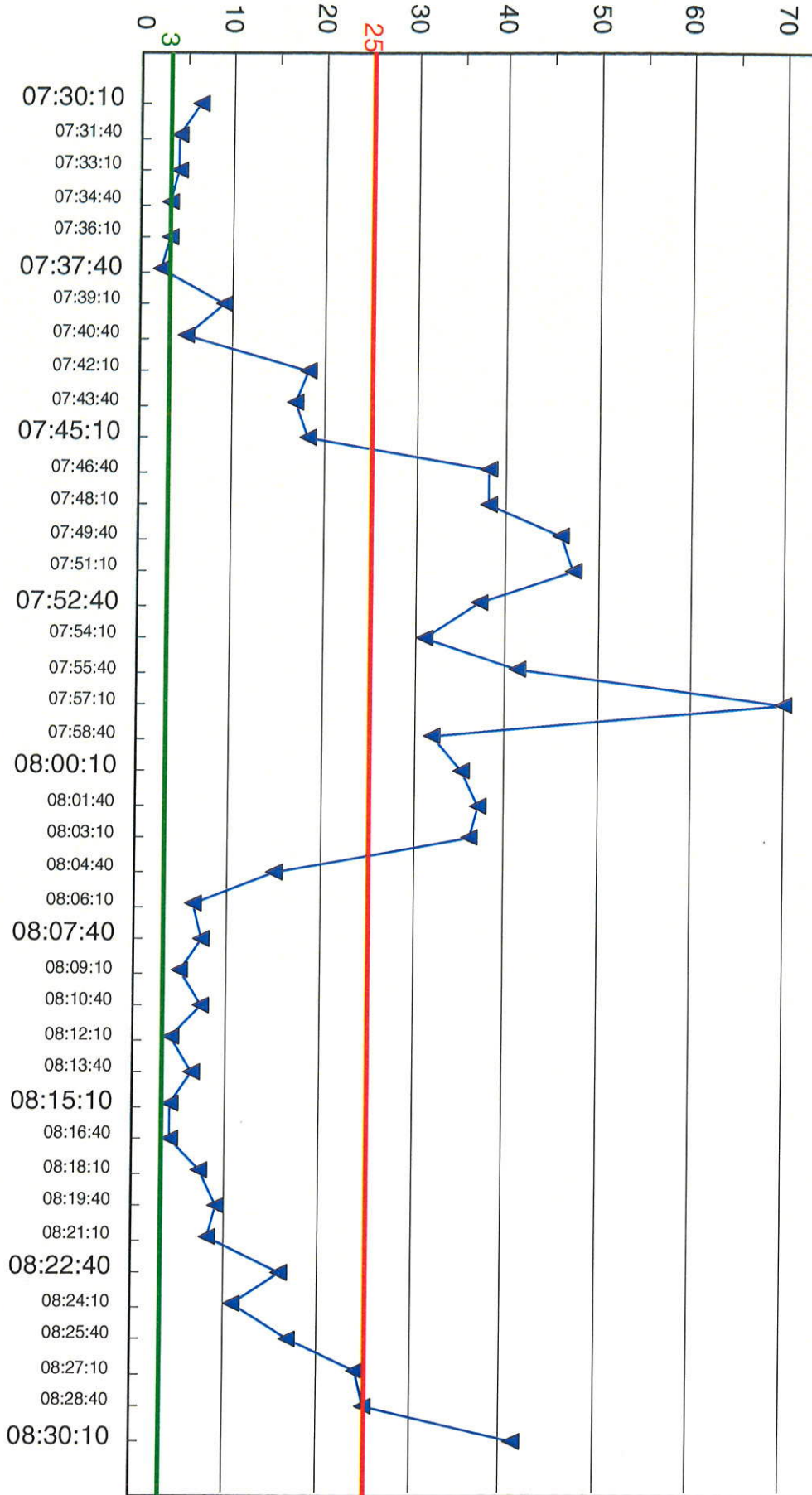
TRAVEL SPEED COMPARISON
WESTBOUND I-275

EXHIBIT 18

FLORIDA DEPARTMENT OF TRANSPORTATION

Time of Day

Queue Length (vehicles)

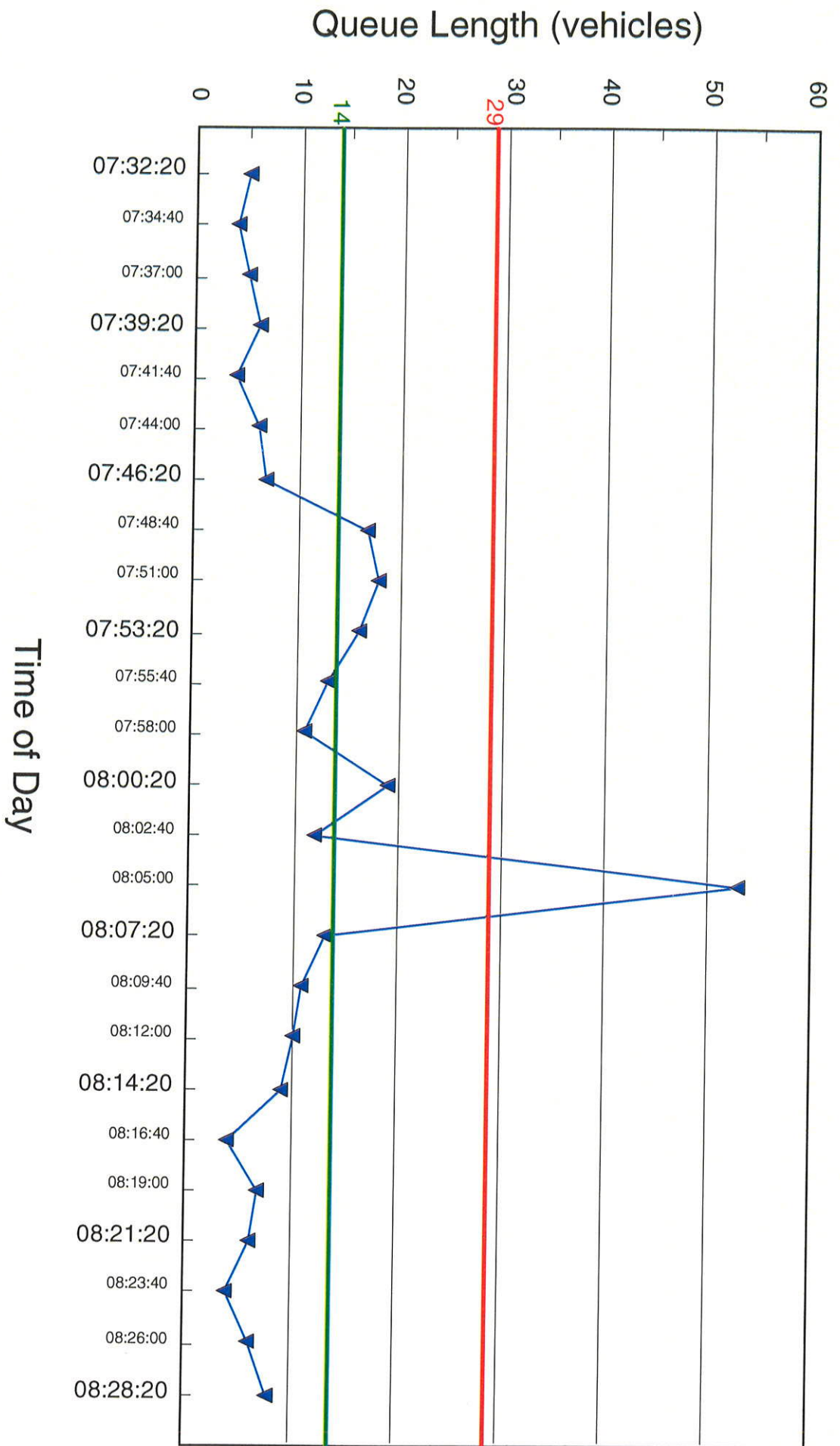


LEGEND

- Maximum Available Queue Length From Stop Bar to Off-Ramp Gore
- Maximum "Safe" Queue Length

EXHIBIT 19

I-275 SIMR
Hillsborough County, Florida
**AM PEAK HOUR QUEUE LENGTH
WESTBOUND I-275
OFF-RAMP TO LOIS AVENUE**
FLORIDA DEPARTMENT OF TRANSPORTATION

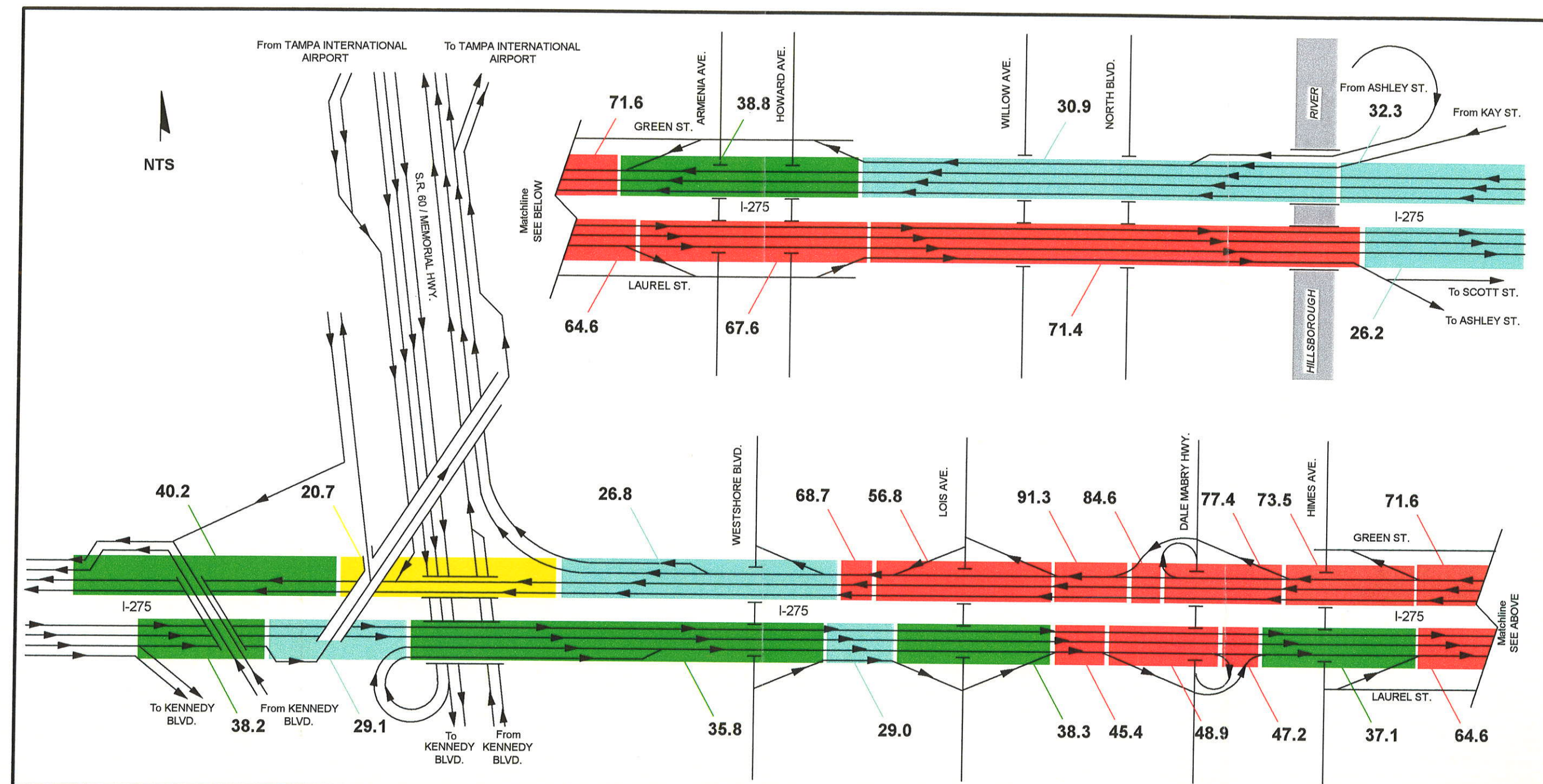


LEGEND

- Maximum Available Queue Length From Stop Bar to Off-Ramp Gore
- Maximum "Safe" Queue Length

EXHIBIT 20

I-275 SIMR
 Hillsborough County, Florida
AM PEAK HOUR QUEUE LENGTH
WESTBOUND I-275
OFF-RAMP TO WEST SHORE BOULEVARD
 FLORIDA DEPARTMENT OF TRANSPORTATION



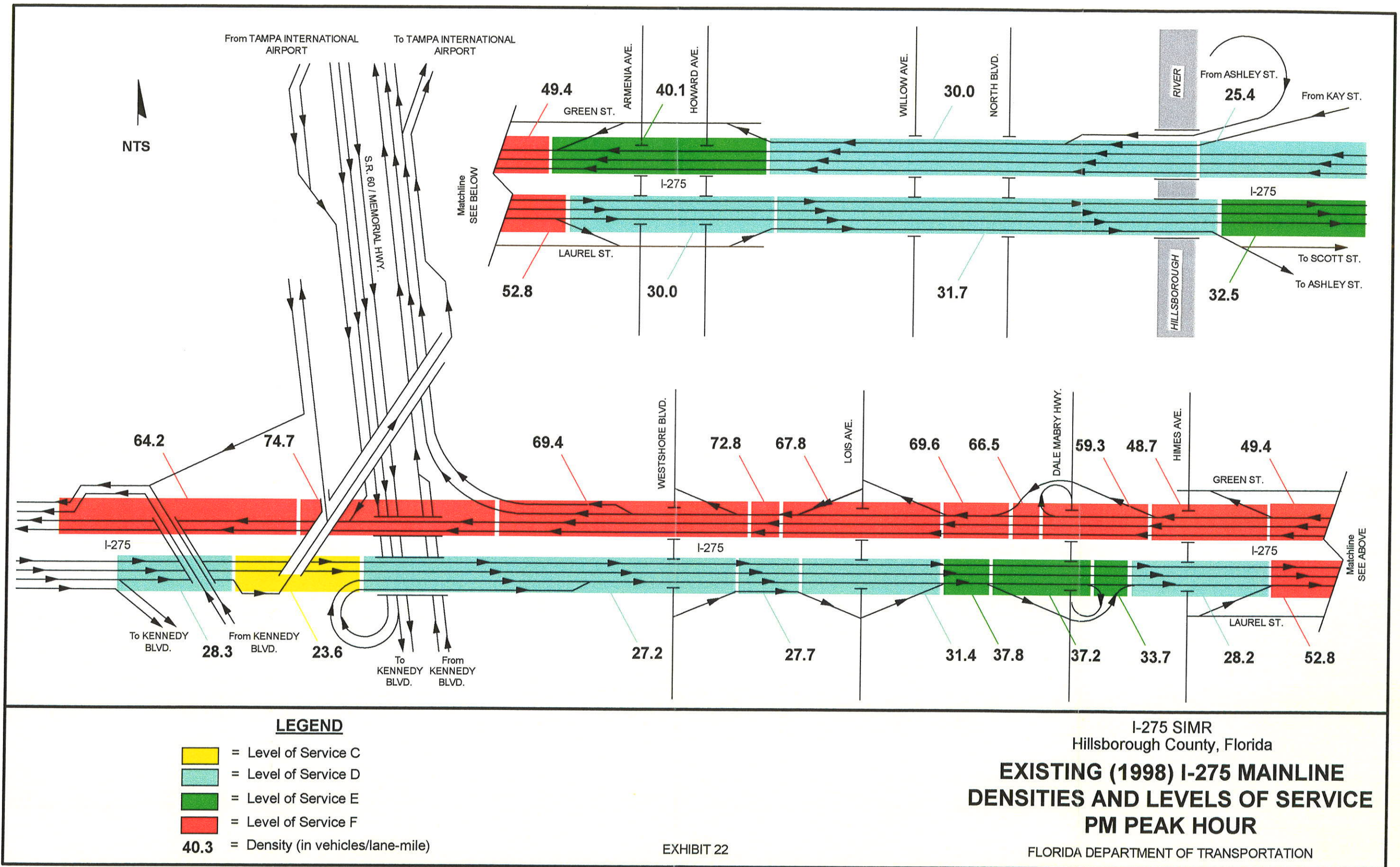
LEGEND

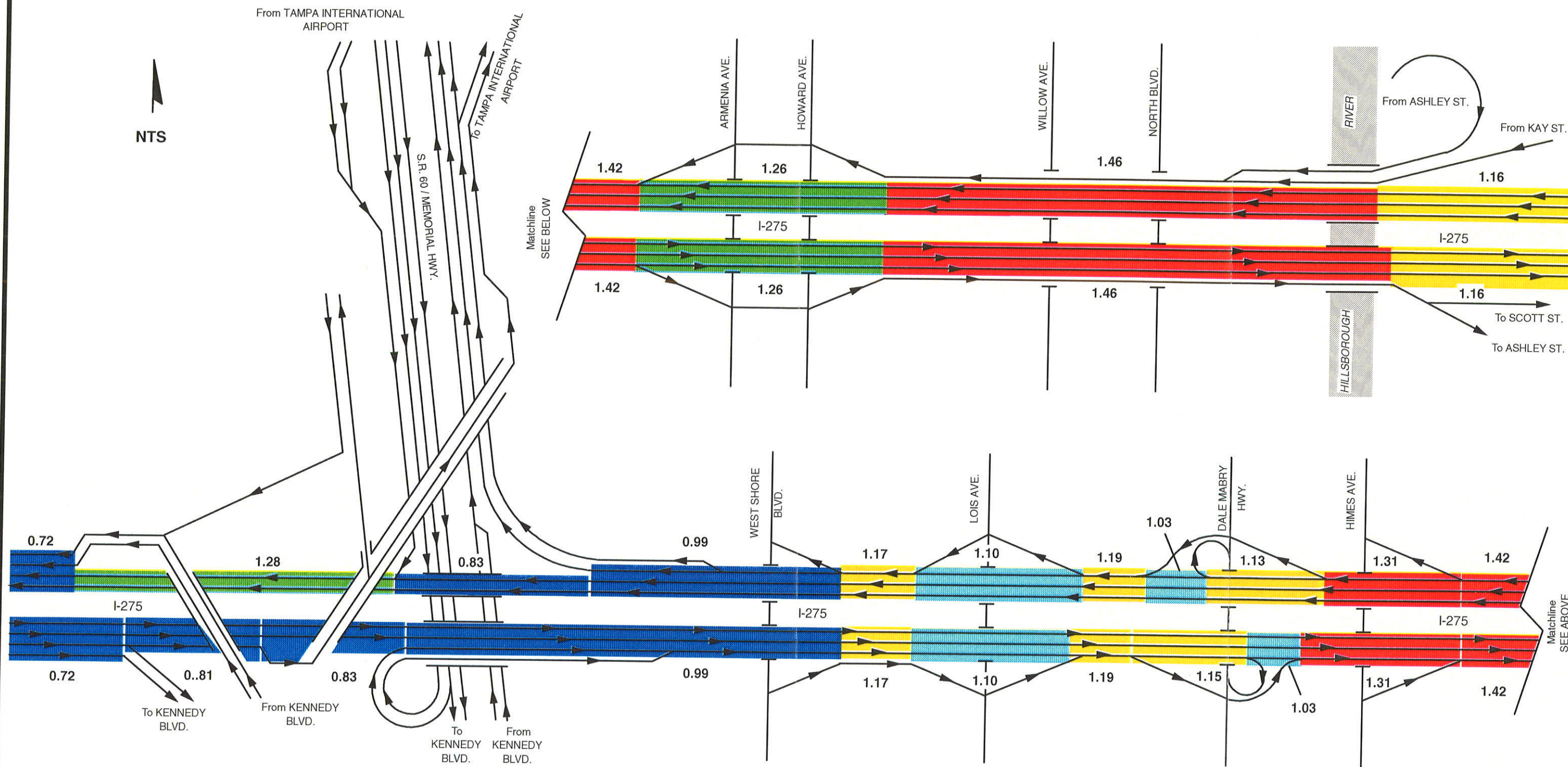
- = Level of Service C
- = Level of Service D
- = Level of Service E
- = Level of Service F
- 40.3** = Density (in vehicles/lane-mile)

EXHIBIT 21

I-275 SIMR Hillsborough County, Florida **EXISTING (1998) I-275 MAINLINE DENSITIES AND LEVELS OF SERVICE AM PEAK HOUR**

FLORIDA DEPARTMENT OF TRANSPORTATION

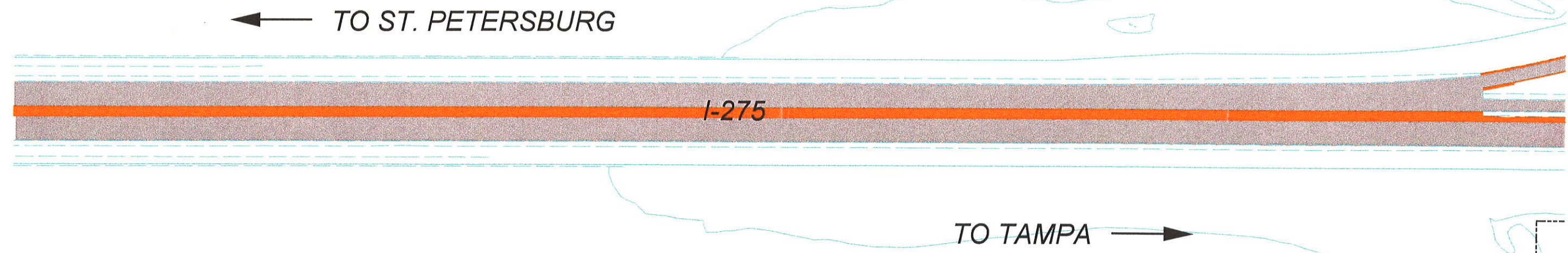
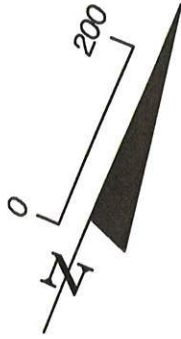




LEGEND

- V/C < 1.00
- V/C 1.00 - 1.10
- V/C 1.10 - 1.20
- V/C 1.20 - 1.30
- V/C > 1.30

I-275 SIMR
Hillsborough County, Florida
EXISTING (1998)
VOLUME-TO-CAPACITY RATIOS
FLORIDA DEPARTMENT OF TRANSPORTATION



e:\LINKS\SIMR_2000\lex_deficiencies\plan001.dgn

09/26/00

CivilMgr

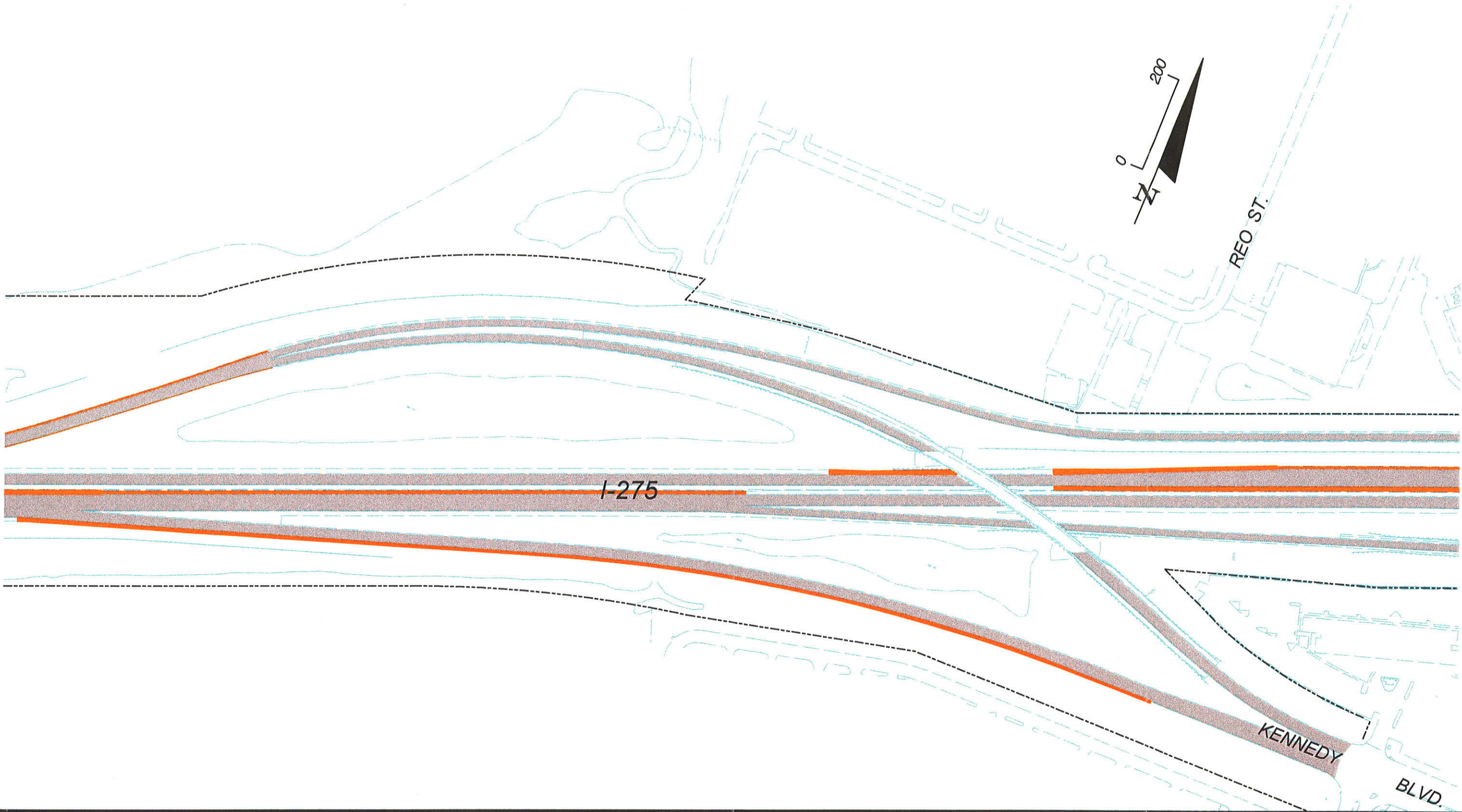
LEGEND

- Existing Right of Way Line
- Vertical Curve Deficiency
- Horizontal Stopping Sight Distance Deficiency
- Shoulder Width Deficiency
- Ramp Length Deficiency
- Gap Acceptance Length Deficiency
- Taper Length Deficiency

I-275 SIMR
Hillsborough County, Florida

EXISTING GEOMETRIC DEFICIENCIES

FLORIDA DEPARTMENT OF TRANSPORTATION



e:\LINKS\SIMR_2000\ex_deficiencies\plan002.dgn

09/26/00

CivilMgr

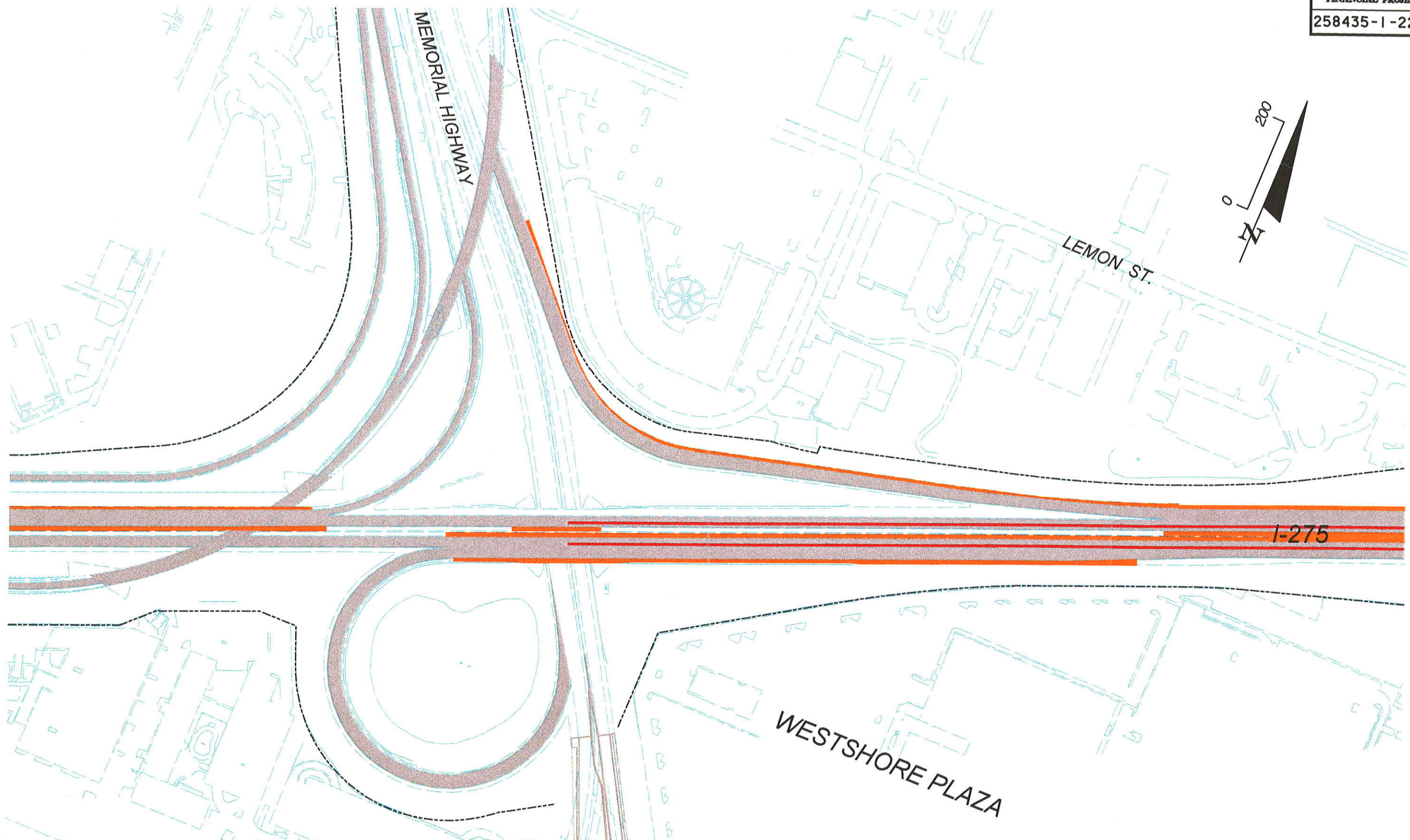
LEGEND

- Existing Right of Way Line
- Vertical Curve Deficiency
- Horizontal Stopping Sight Distance Deficiency
- Shoulder Width Deficiency
- Ramp Length Deficiency
- Gap Acceptance Length Deficiency
- Taper Length Deficiency

I-275 SIMR
Hillsborough County, Florida

EXISTING GEOMETRIC DEFICIENCIES

FLORIDA DEPARTMENT OF TRANSPORTATION



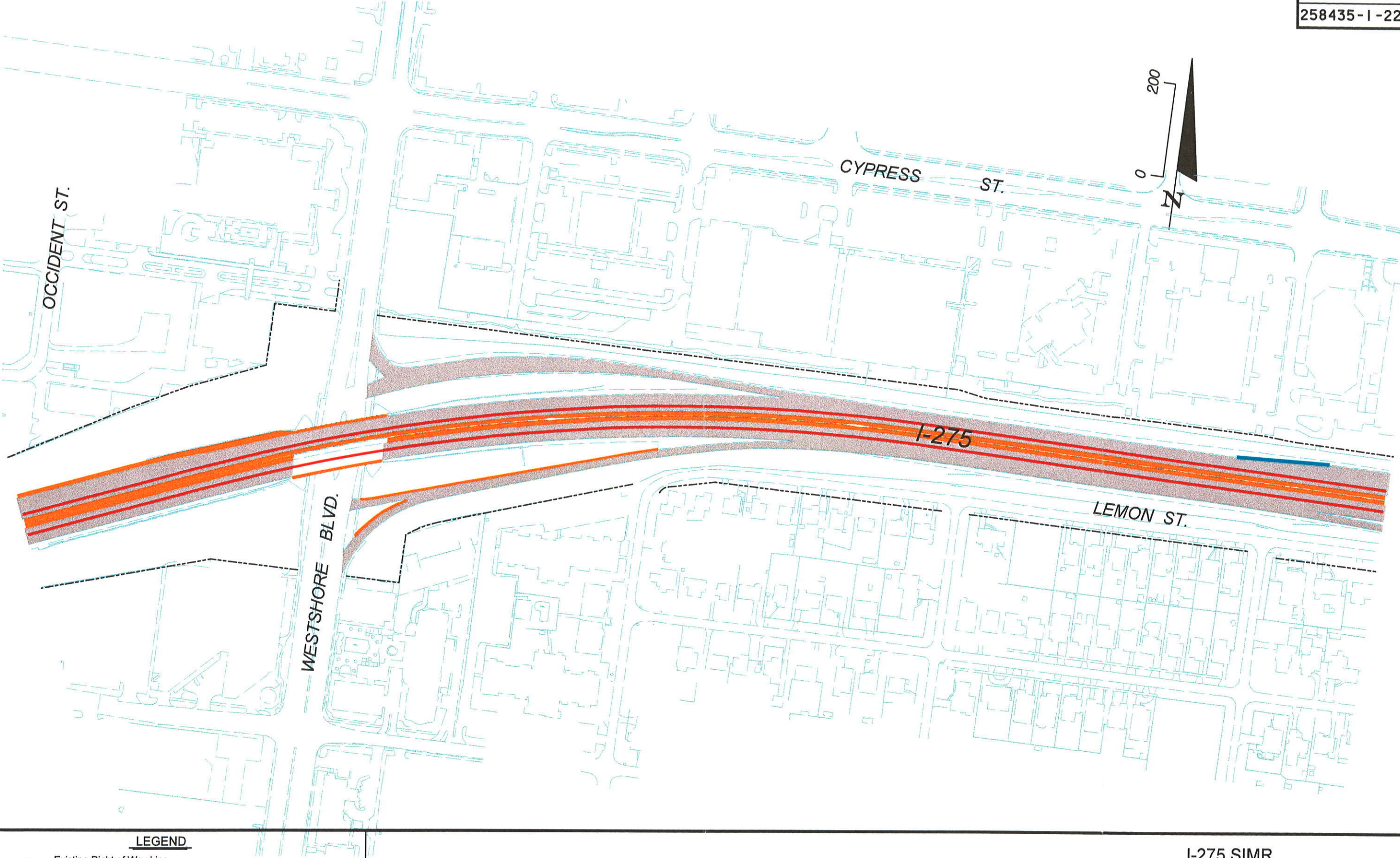
LEGEND

- Existing Right of Way Line
- Vertical Curve Deficiency
- Horizontal Stopping Sight Distance Deficiency
- Shoulder Width Deficiency
- Ramp Length Deficiency
- Gap Acceptance Length Deficiency
- Taper Length Deficiency

I-275 SIMR
Hillsborough County, Florida

EXISTING GEOMETRIC DEFICIENCIES

FLORIDA DEPARTMENT OF TRANSPORTATION

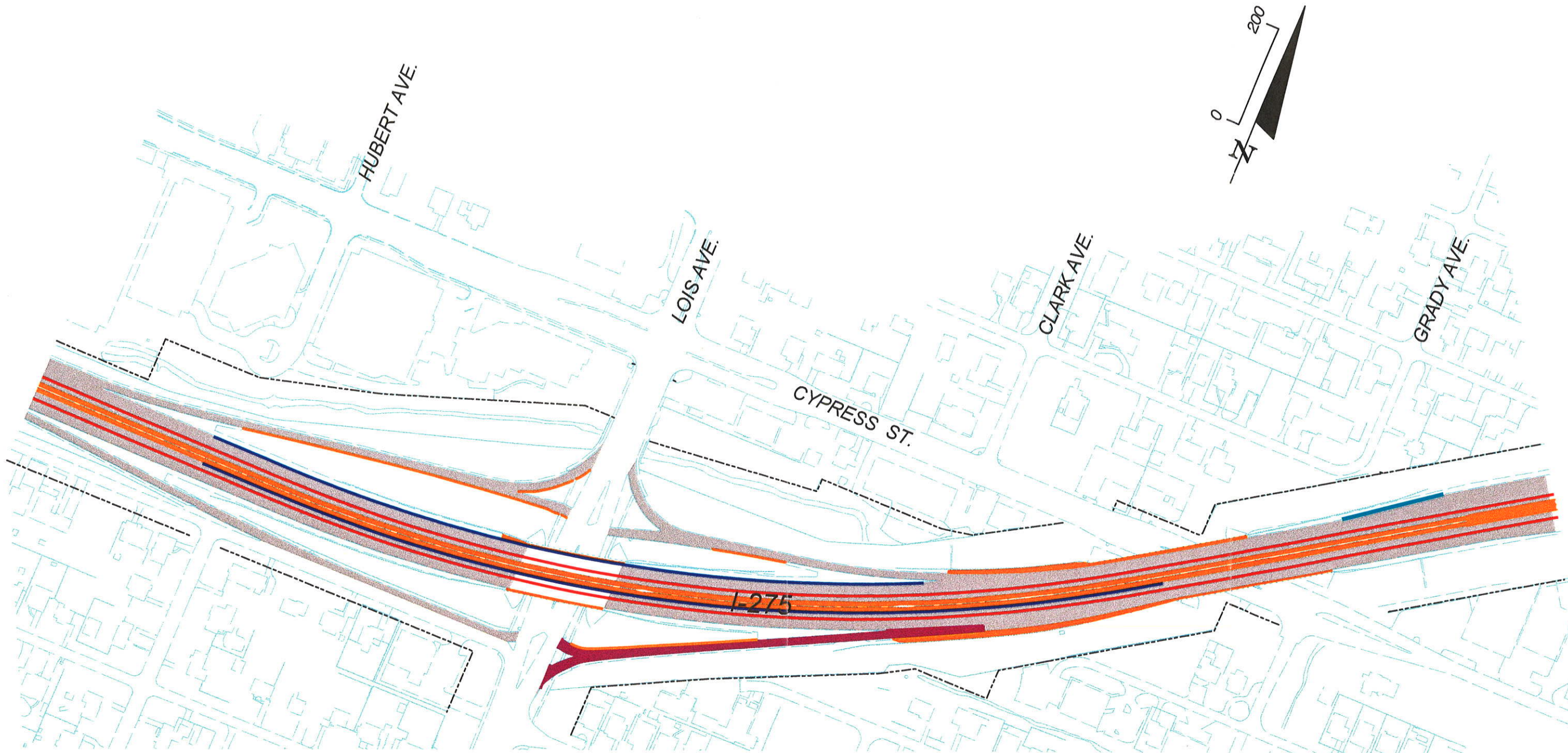


- LEGEND**
- Existing Right of Way Line
 - Vertical Curve Deficiency
 - Horizontal Stopping Sight Distance Deficiency
 - Shoulder Width Deficiency
 - Ramp Length Deficiency
 - Gap Acceptance Length Deficiency
 - Taper Length Deficiency

I-275 SIMR
Hillsborough County, Florida

EXISTING GEOMETRIC DEFICIENCIES

FLORIDA DEPARTMENT OF TRANSPORTATION



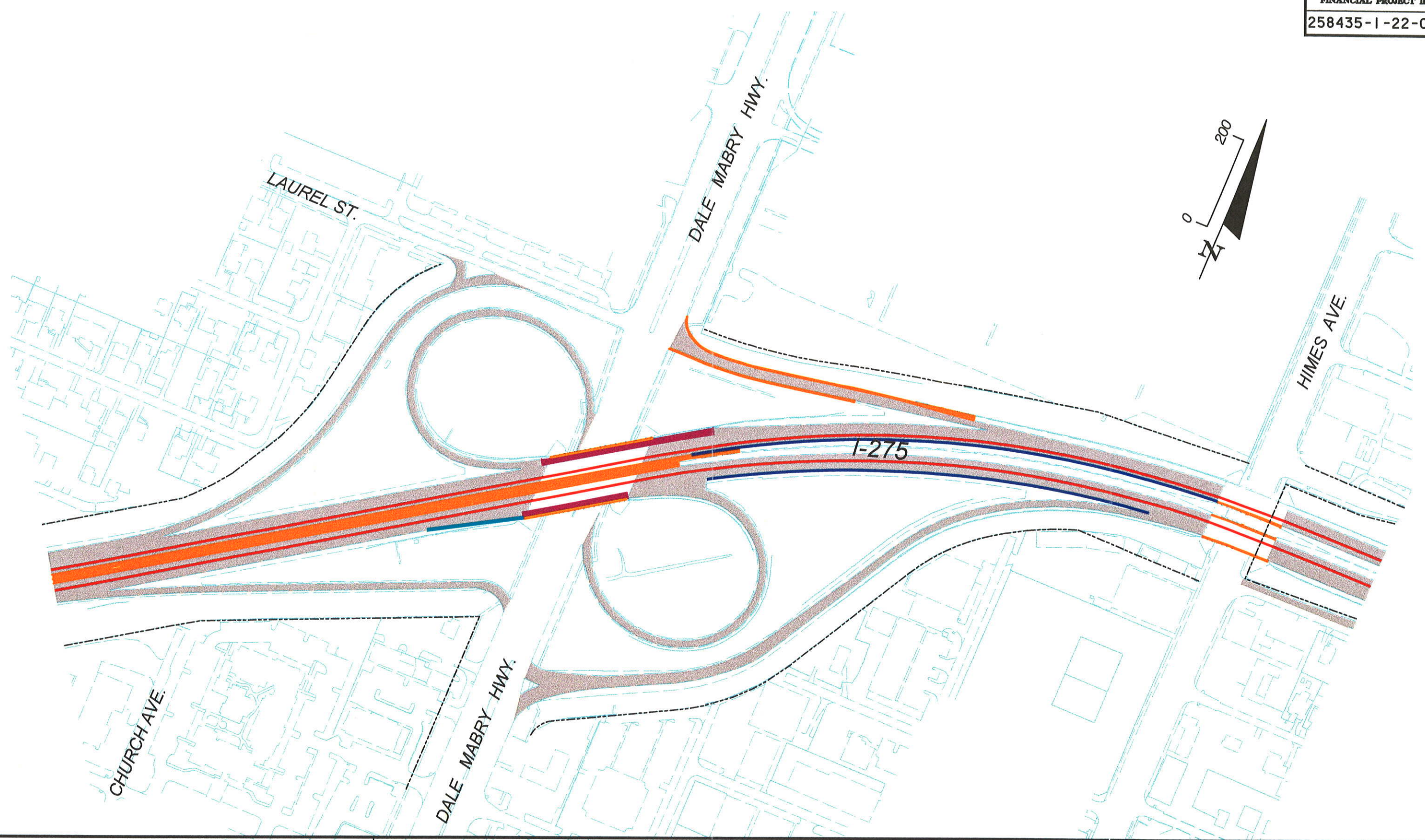
e:\LINKS\SIMR_2000\ex_deficiencies\plan005.dgn

09/26/00

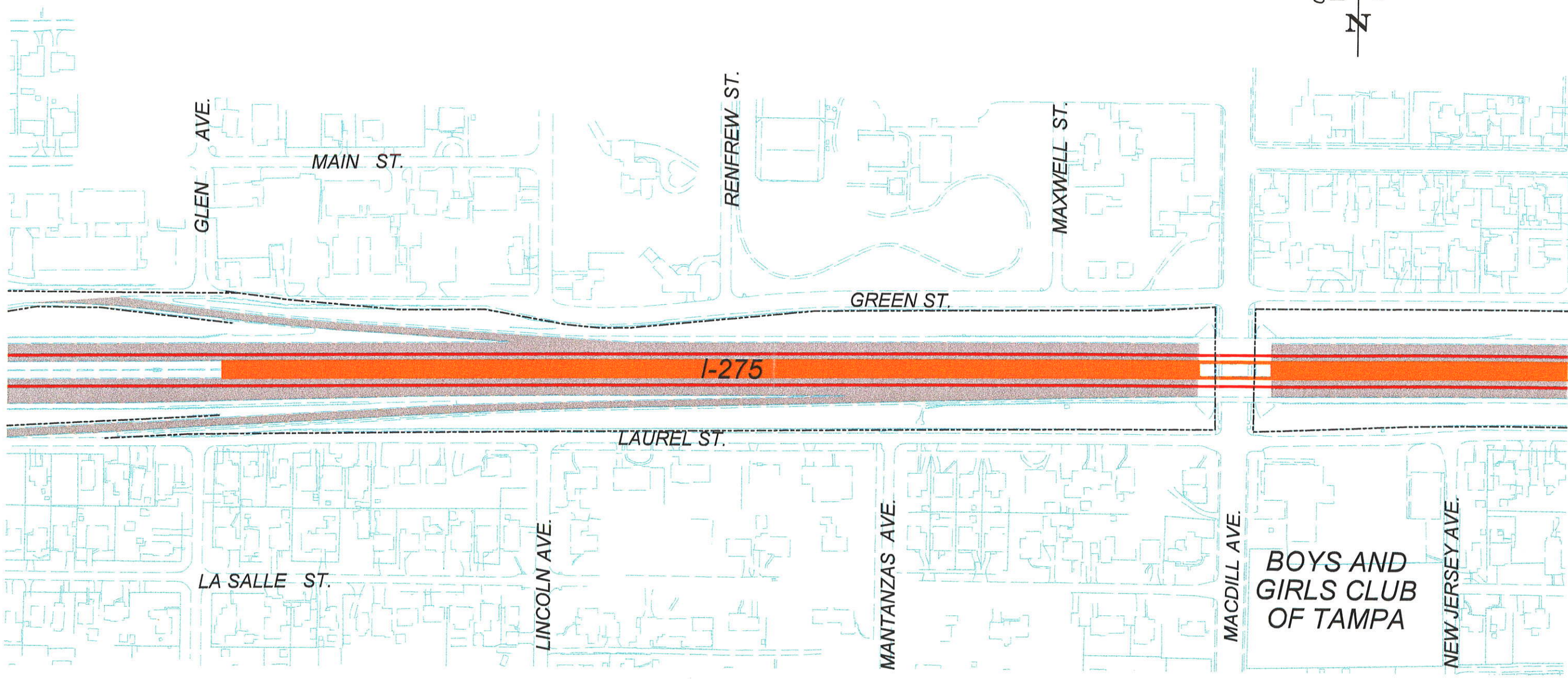
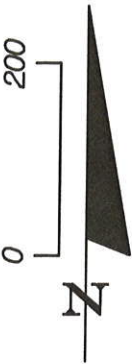
CivilMgr

- LEGEND**
- Existing Right of Way Line
 - Vertical Curve Deficiency
 - Horizontal Stopping Sight Distance Deficiency
 - Shoulder Width Deficiency
 - Ramp Length Deficiency
 - Gap Acceptance Length Deficiency
 - Taper Length Deficiency

e:\LINKS\ISMR_2000\ex_deficiencies\plan006.dgn
09/26/00
Civil/Gr



Mc FARLAND PARK



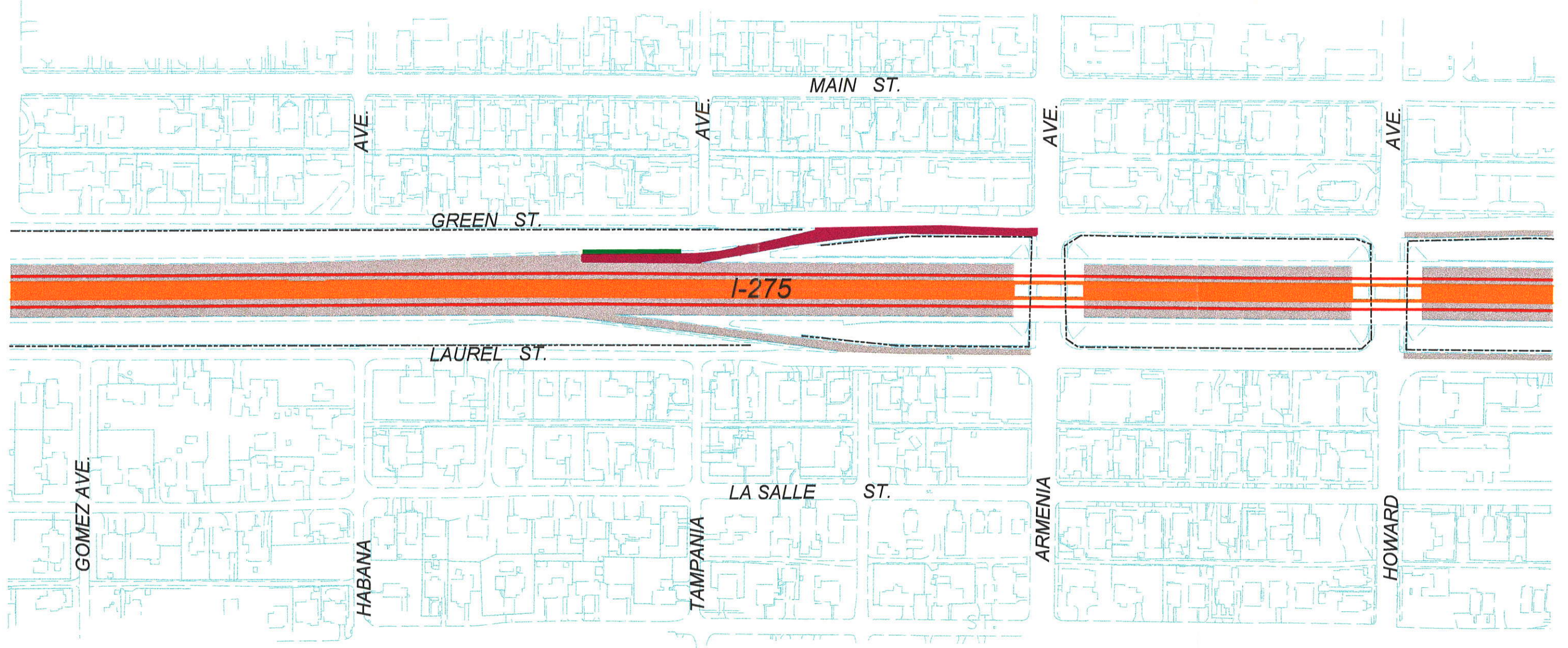
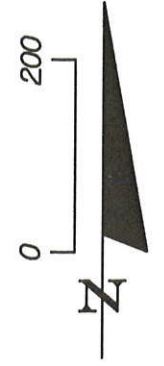
LEGEND

- Existing Right of Way Line
- Vertical Curve Deficiency
- Horizontal Stopping Sight Distance Deficiency
- Shoulder Width Deficiency
- Ramp Length Deficiency
- Gap Acceptance Length Deficiency
- Taper Length Deficiency

I-275 SIMR
Hillsborough County, Florida

EXISTING GEOMETRIC DEFICIENCIES

FLORIDA DEPARTMENT OF TRANSPORTATION



LEGEND

- Existing Right of Way Line
- Vertical Curve Deficiency
- Horizontal Stopping Sight Distance Deficiency
- Shoulder Width Deficiency
- Ramp Length Deficiency
- Gap Acceptance Length Deficiency
- Taper Length Deficiency

I-275 SIMR
Hillsborough County, Florida

EXISTING GEOMETRIC DEFICIENCIES

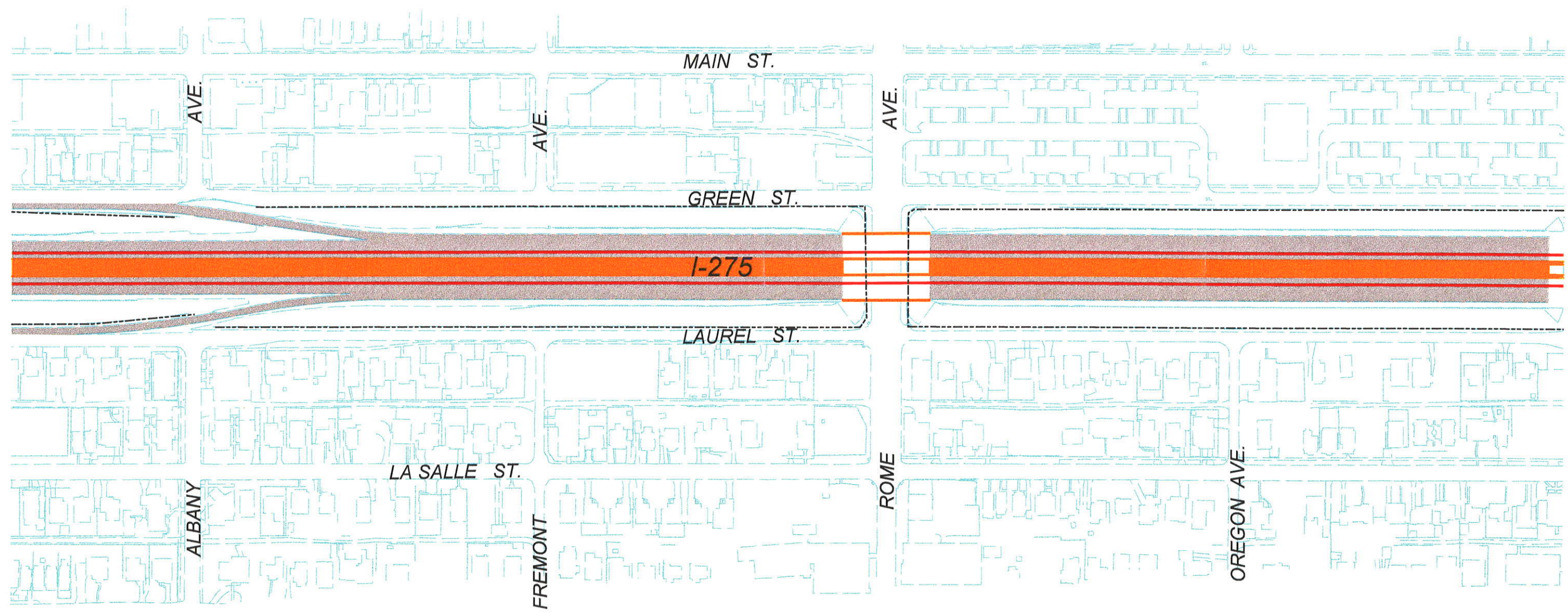
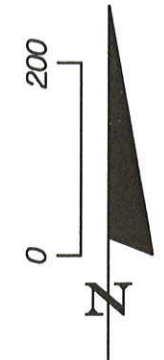
FLORIDA DEPARTMENT OF TRANSPORTATION

EXHIBIT 31

e:\LINKS\SIMR_2000\ex_deficiencies\plan008.dgn

09/26/00

CivilMgr



LEGEND

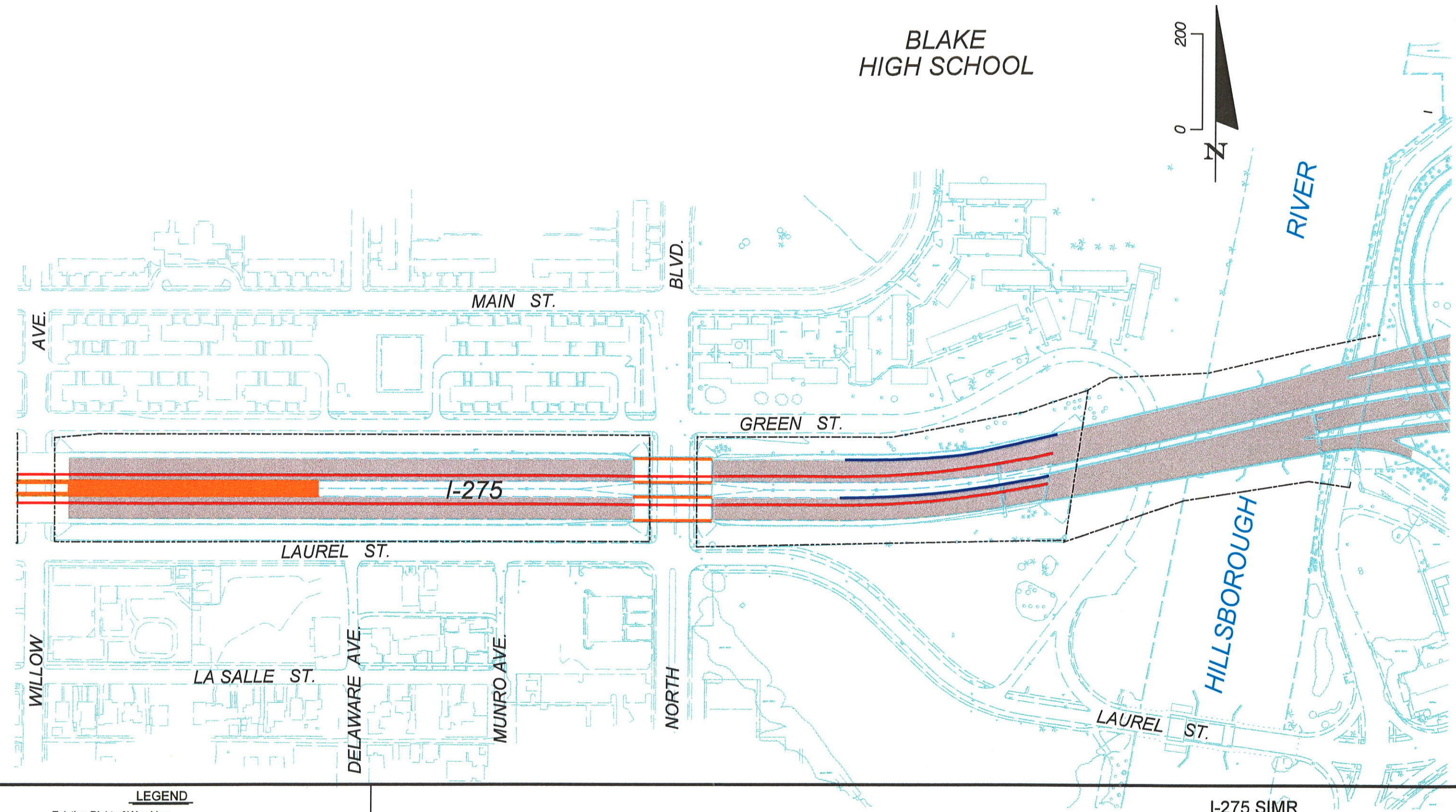
- Existing Right of Way Line
- Vertical Curve Deficiency
- Horizontal Stopping Sight Distance Deficiency
- Shoulder Width Deficiency
- Ramp Length Deficiency
- Gap Acceptance Length Deficiency
- Taper Length Deficiency

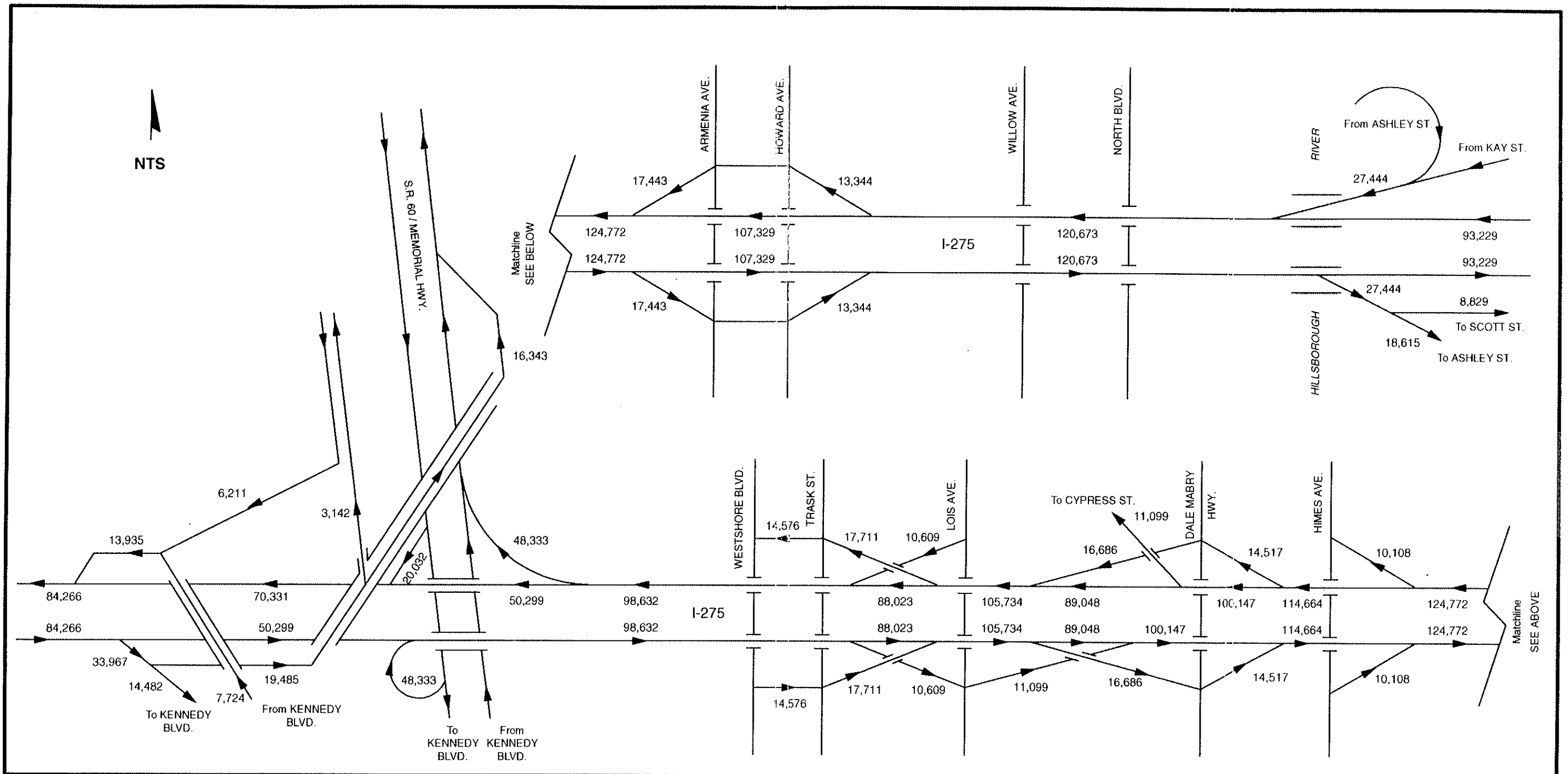
I-275 SIMR
Hillsborough County, Florida

EXISTING GEOMETRIC DEFICIENCIES

FLORIDA DEPARTMENT OF TRANSPORTATION

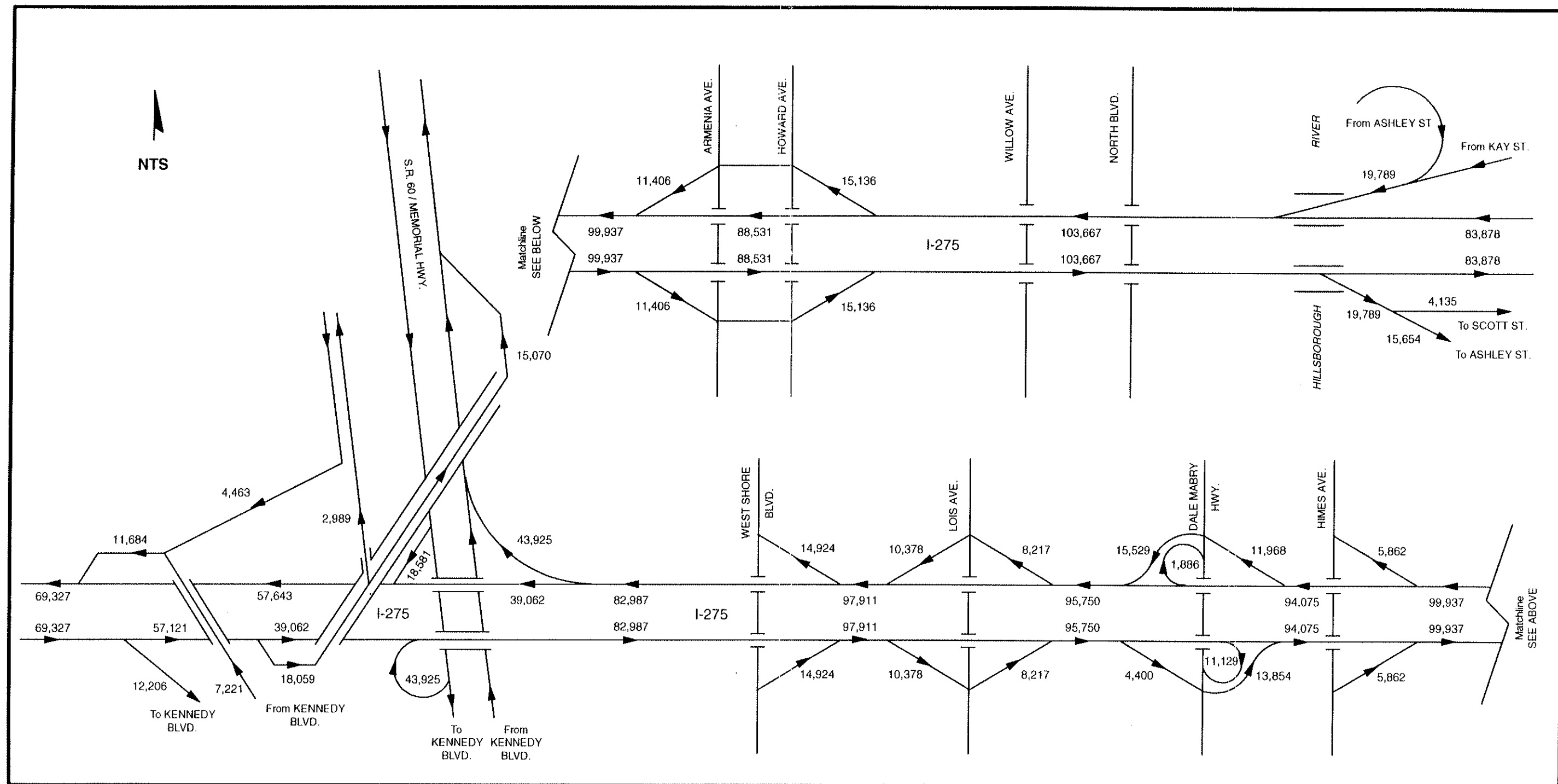
e:\LINKS\SIMR_2000\ex_deficiencies\plan010.dgn
09/26/00
CivilMgr



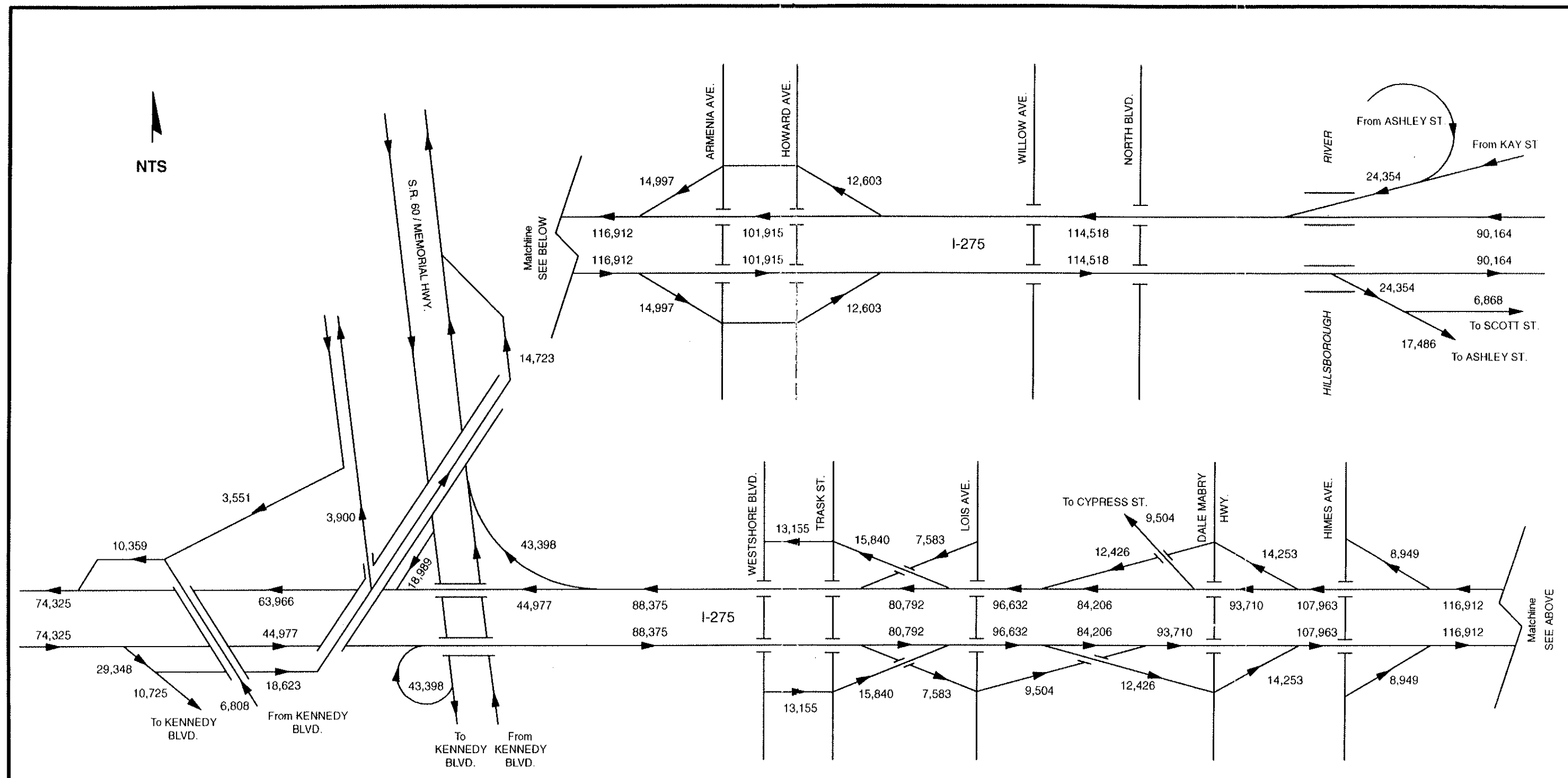


I-275 SIMR
Hillsborough County, Florida

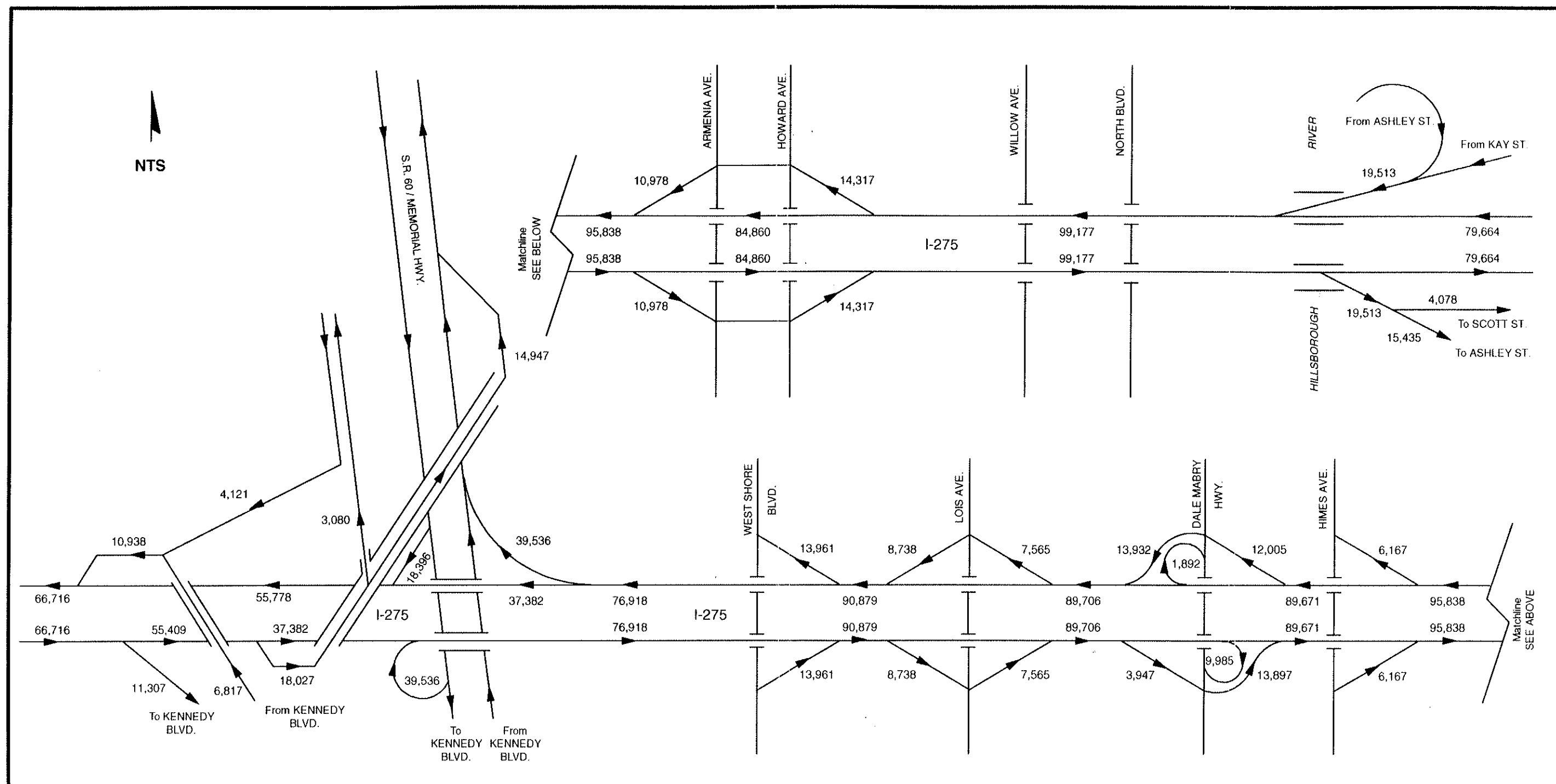
**YEAR 2025 AVERAGE ANNUAL
DAILY TRAFFIC VOLUMES
STAGE 1, 2 AND 3 IMPROVEMENTS**



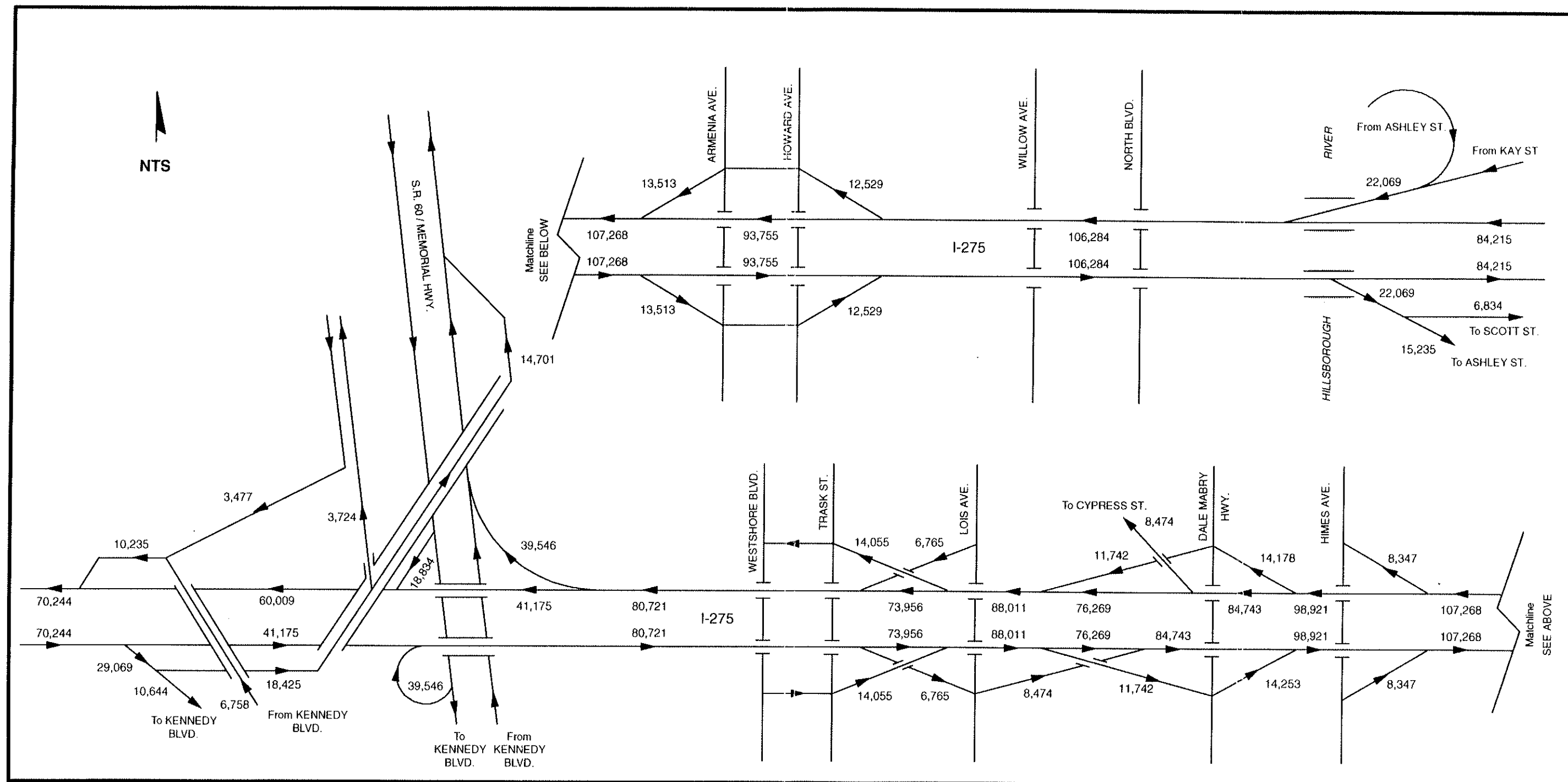
I-275 SIMR
Hillsborough County, Florida
**YEAR 2015 AVERAGE ANNUAL
DAILY TRAFFIC VOLUMES
NO-BUILD ALTERNATIVE**
FLORIDA DEPARTMENT OF TRANSPORTATION



I-275 SIMR
Hillsborough County, Florida
**YEAR 2015 AVERAGE ANNUAL
DAILY TRAFFIC VOLUMES
STAGE 1, 2 AND 3 IMPROVEMENTS**

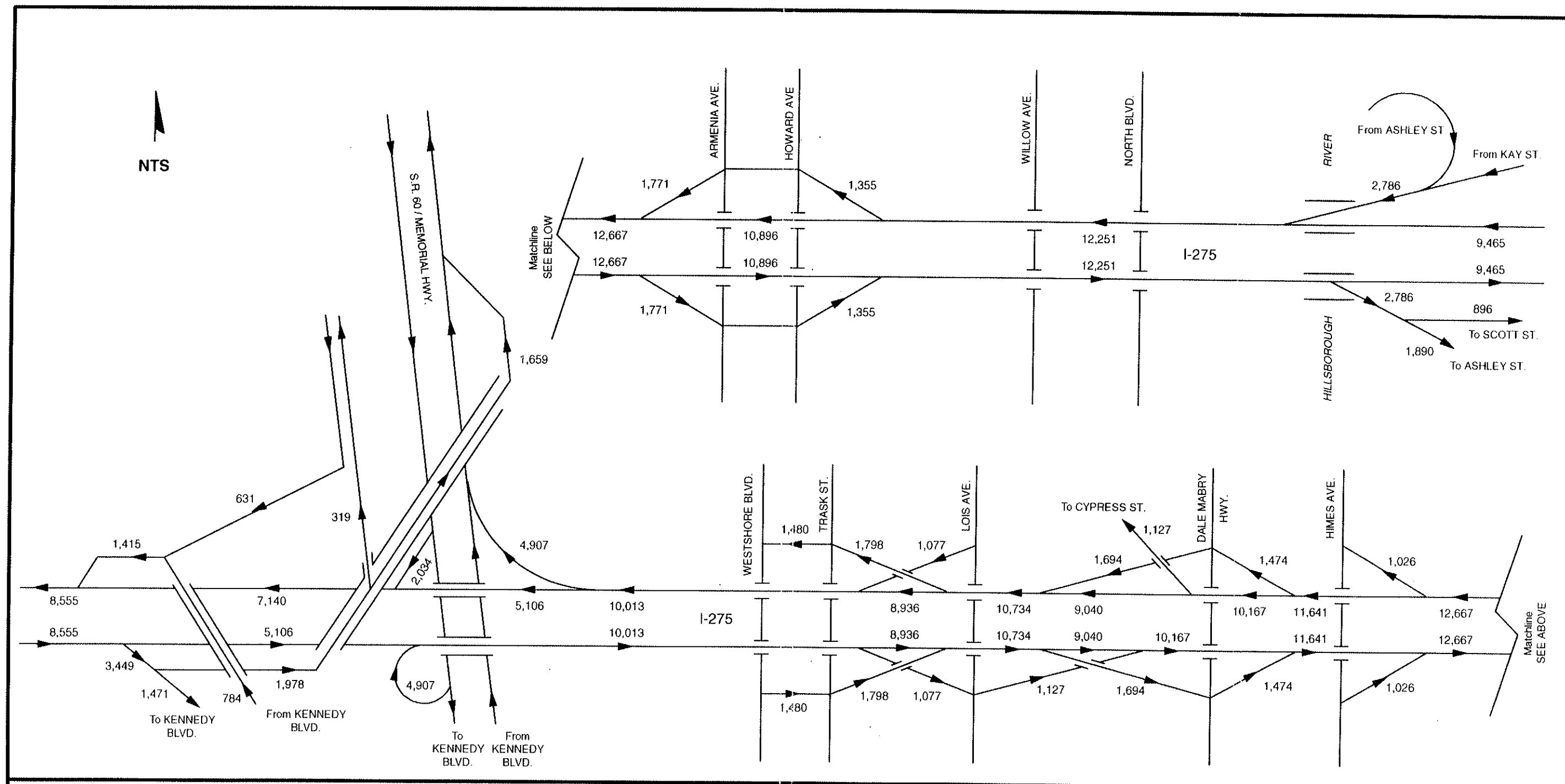


I-275 SIMR
Hillsborough County, Florida
**YEAR 2010 AVERAGE ANNUAL
DAILY TRAFFIC VOLUMES
NO-BUILD ALTERNATIVE**
FLORIDA DEPARTMENT OF TRANSPORTATION

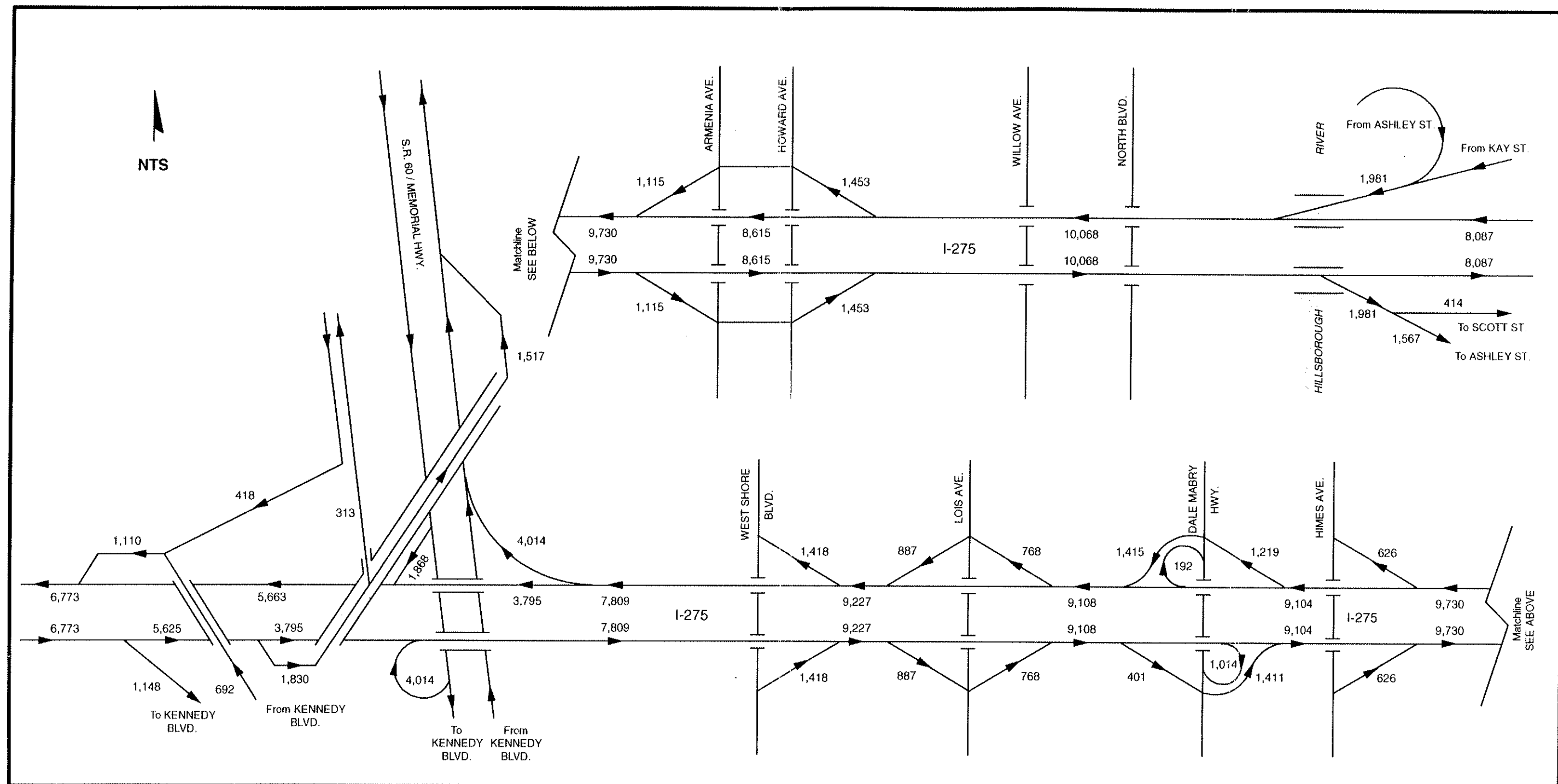


I-275 SIMR
Hillsborough County, Florida

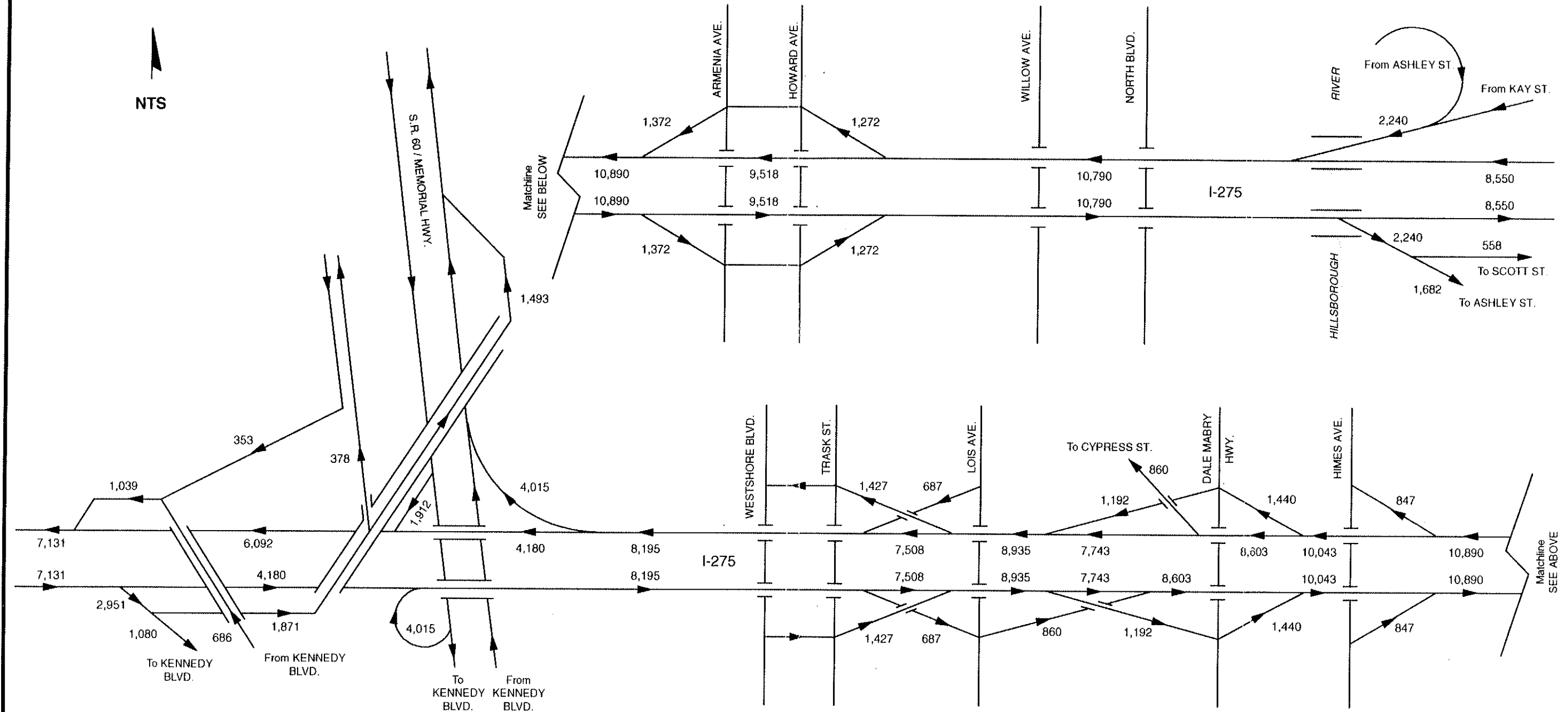
**YEAR 2010 AVERAGE ANNUAL
DAILY TRAFFIC VOLUMES
STAGE 1, 2 AND 3 IMPROVEMENTS**



I-275 SIMR
Hillsborough County, Florida
**YEAR 2025 DIRECTIONAL
DESIGN HOUR VOLUMES
STAGE 1, 2 AND 3 IMPROVEMENTS**
FLORIDA DEPARTMENT OF TRANSPORTATION



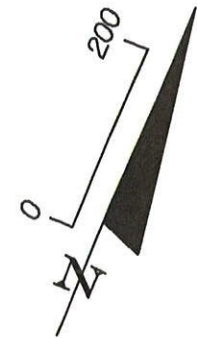
I-275 SIMR
Hillsborough County, Florida
**YEAR 2010 DIRECTIONAL
DESIGN HOUR VOLUMES
NO-BUILD ALTERNATIVE**
FLORIDA DEPARTMENT OF TRANSPORTATION



I-275 SIMR
Hillsborough County, Florida
**YEAR 2010 DIRECTIONAL
DESIGN HOUR VOLUMES
STAGE 1, 2 AND 3 IMPROVEMENTS**

EXHIBIT 45

FLORIDA DEPARTMENT OF TRANSPORTATION



← TO ST. PETERSBURG

I-275

TO TAMPA →

ALL IMPROVEMENTS THIS SHEET ARE STAGE 2

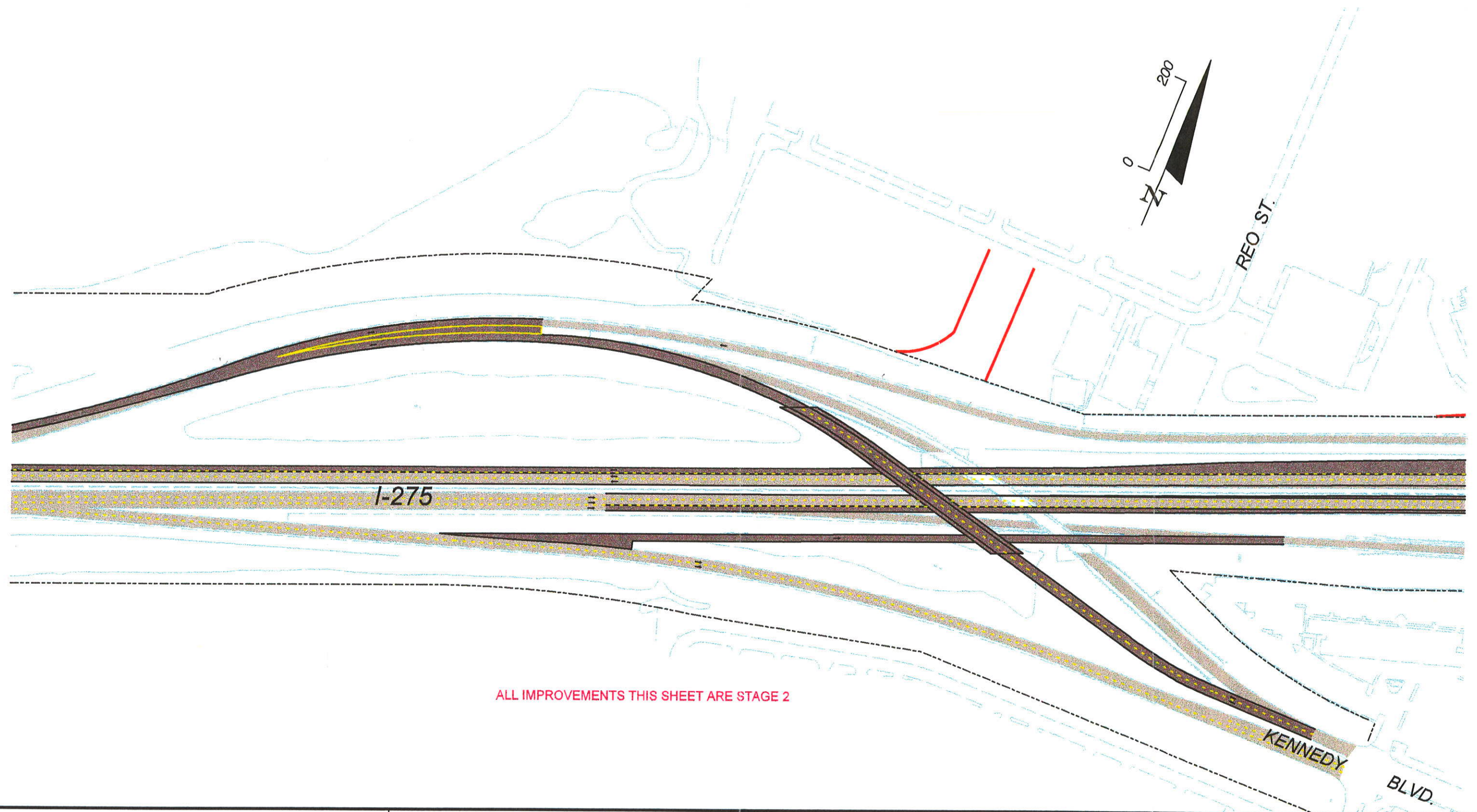
LEGEND

- Existing Roadway
- Proposed Roadway Improvements
- Existing Right of Way

I-275 SIMR
Hillsborough County, Florida

RECOMMENDED IMPROVEMENT CONCEPT

FLORIDA DEPARTMENT OF TRANSPORTATION



ALL IMPROVEMENTS THIS SHEET ARE STAGE 2

LEGEND

- Existing Roadway
- Proposed Roadway Improvements
- Existing Right of Way
- Proposed Right of Way

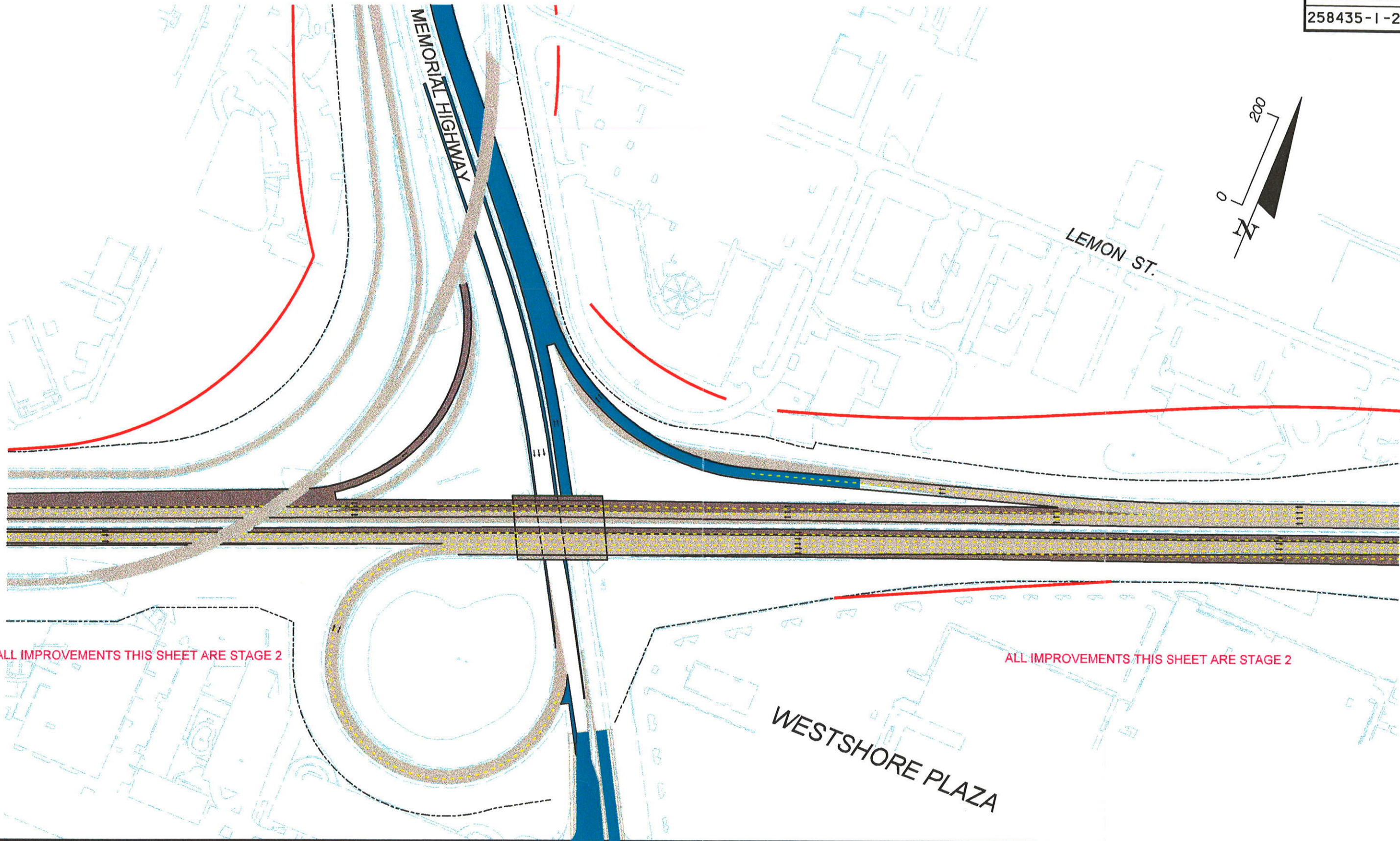
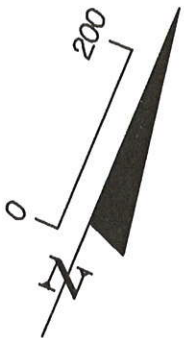
I-275 SIMR
Hillsborough County, Florida

RECOMMENDED IMPROVEMENT CONCEPT

FLORIDA DEPARTMENT OF TRANSPORTATION

EXHIBIT 47

e:\LINKS\IMR_2000\plan002.dgn
12/21/00
civilmgr



ALL IMPROVEMENTS THIS SHEET ARE STAGE 2

ALL IMPROVEMENTS THIS SHEET ARE STAGE 2

LEGEND

- Existing Roadway
- Proposed Roadway Improvements
- Recently Completed Roadway Resurfacing Improvements
- Potential Local Roadway Improvement (By Others)
- Existing Right of Way
- Proposed Right of Way

I-275 SIMR
Hillsborough County, Florida

RECOMMENDED IMPROVEMENT CONCEPT

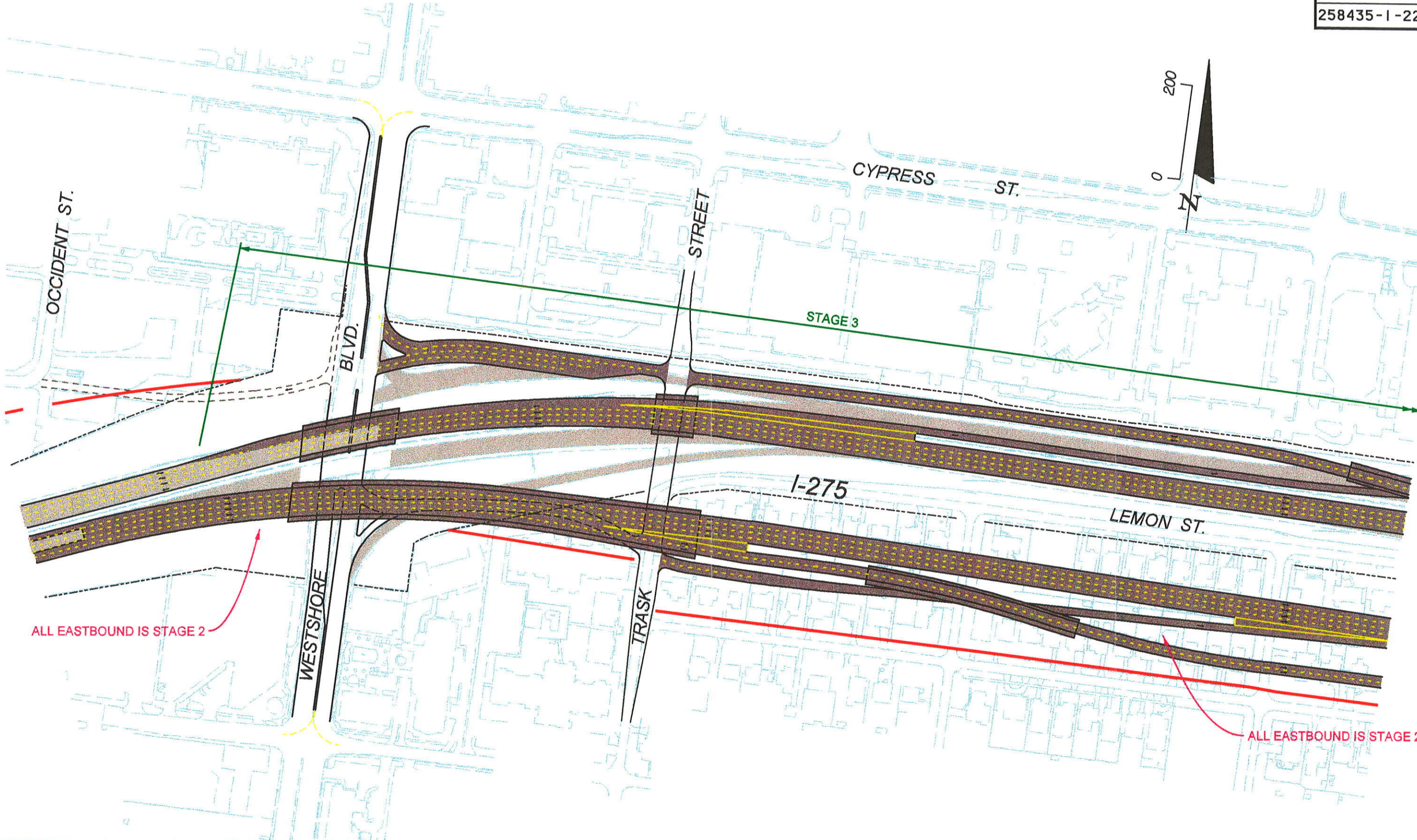
FLORIDA DEPARTMENT OF TRANSPORTATION

EXHIBIT 48

e:\LINKS\SIMR_2000\plan003.dgn

12/21/00

civilmgr



e:\LINKS\SIMR_2000\plan004.dgn
12/21/00
civilmgr

LEGEND

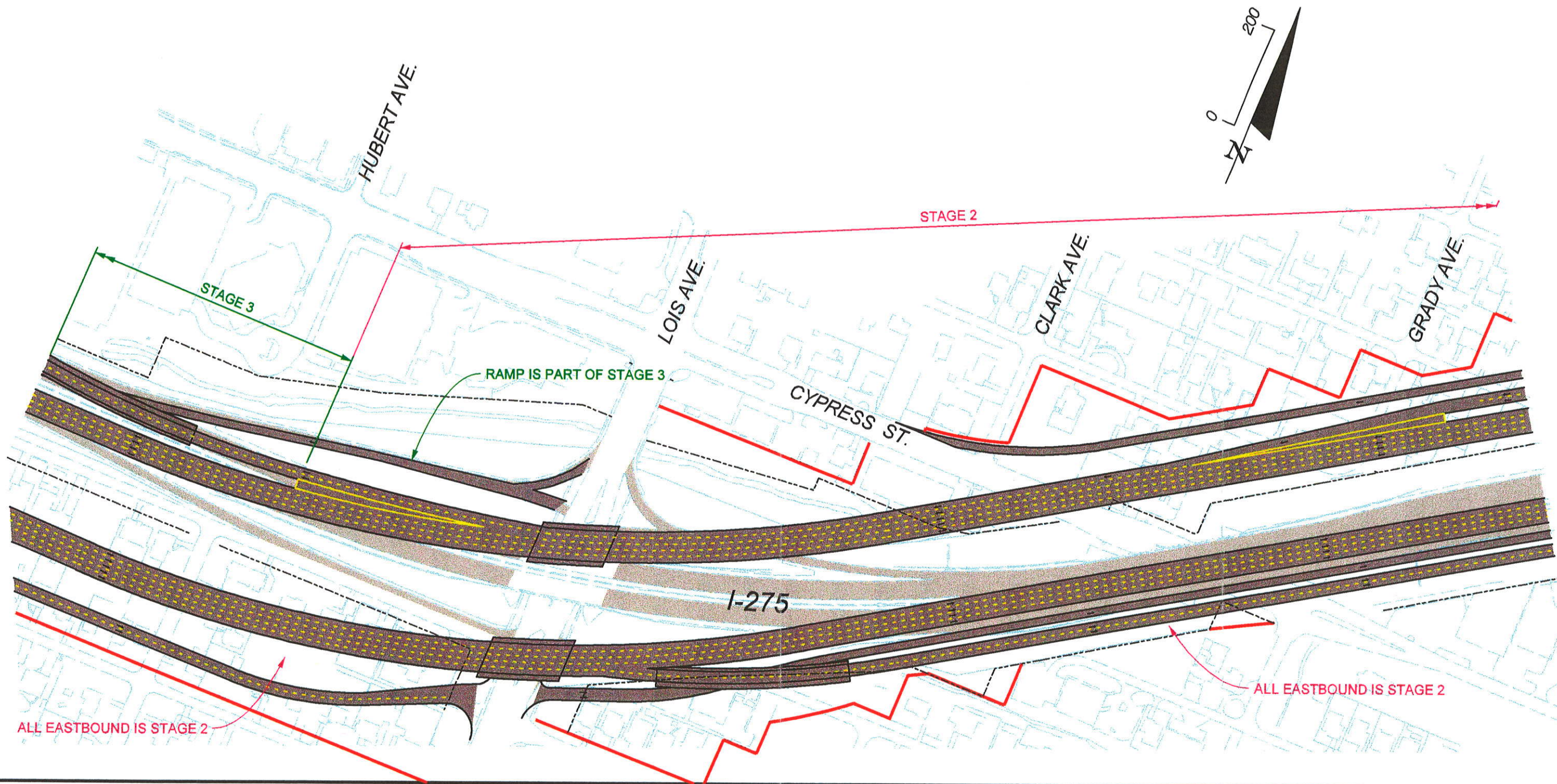
-  Existing Roadway
-  Proposed Roadway Improvements
-  Potential Local Roadway Improvement (By Others)
-  Existing Right of Way
-  Proposed Right of Way

I-275 SIMR
Hillsborough County, Florida

RECOMMENDED IMPROVEMENT CONCEPT

FLORIDA DEPARTMENT OF TRANSPORTATION

e:\LINKS\SIMR_2000\plan005.dgn
12/21/00
civil.mgr

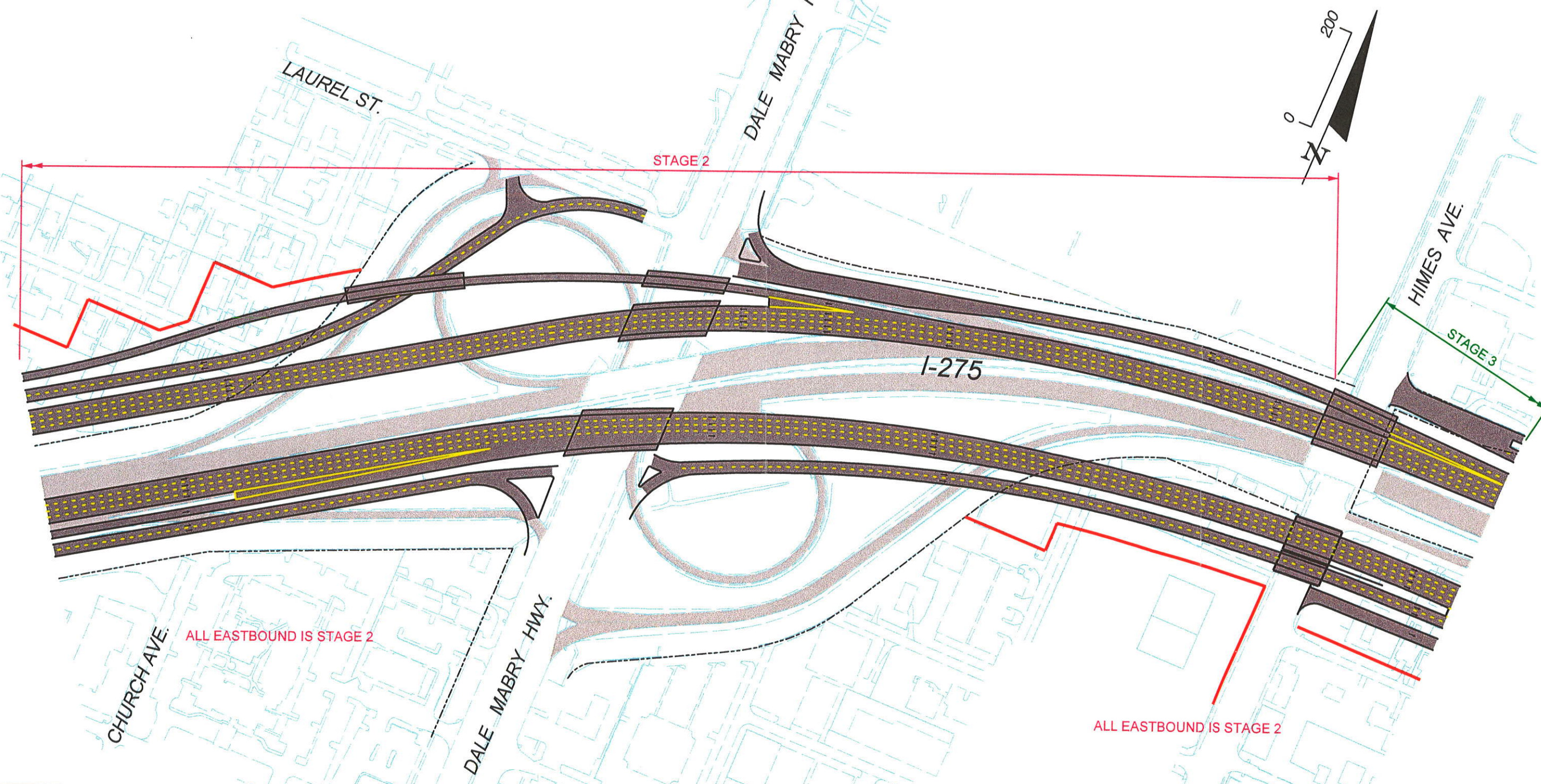


LEGEND

- Existing Roadway
- Proposed Roadway Improvements
- Existing Right of Way
- Proposed Right of Way

I-275 SIMR
Hillsborough County, Florida

RECOMMENDED IMPROVEMENT CONCEPT



e:\LINKS\ISIMR_2000\plan006.dgn

02/12/01

CivilMg

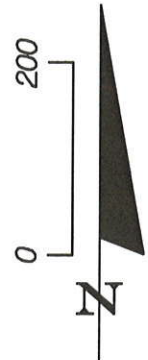
LEGEND

- Existing Roadway
- Proposed Roadway Improvements
- Existing Right of Way
- Proposed Right of Way

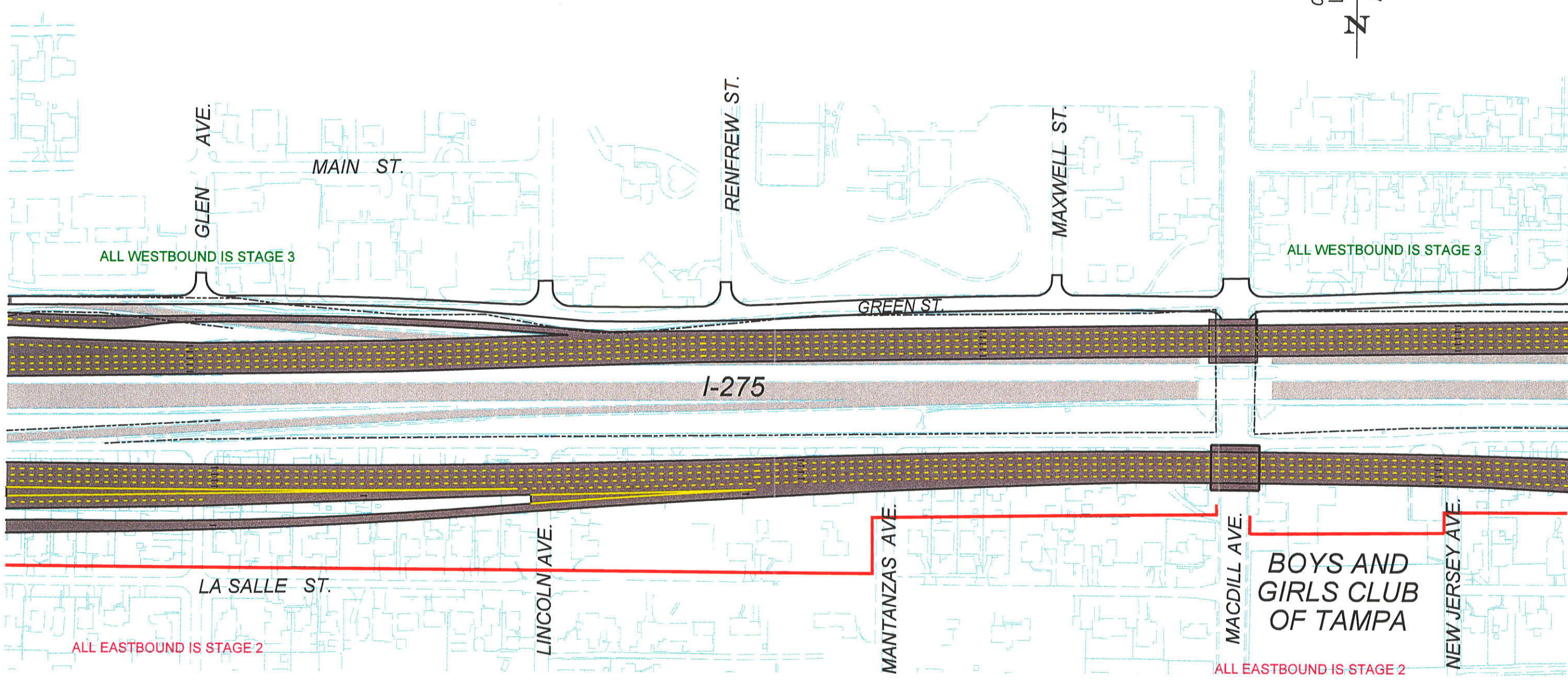
I-275 SIMR
Hillsborough County, Florida

RECOMMENDED IMPROVEMENT CONCEPT

FLORIDA DEPARTMENT OF TRANSPORTATION



Mc FARLAND PARK

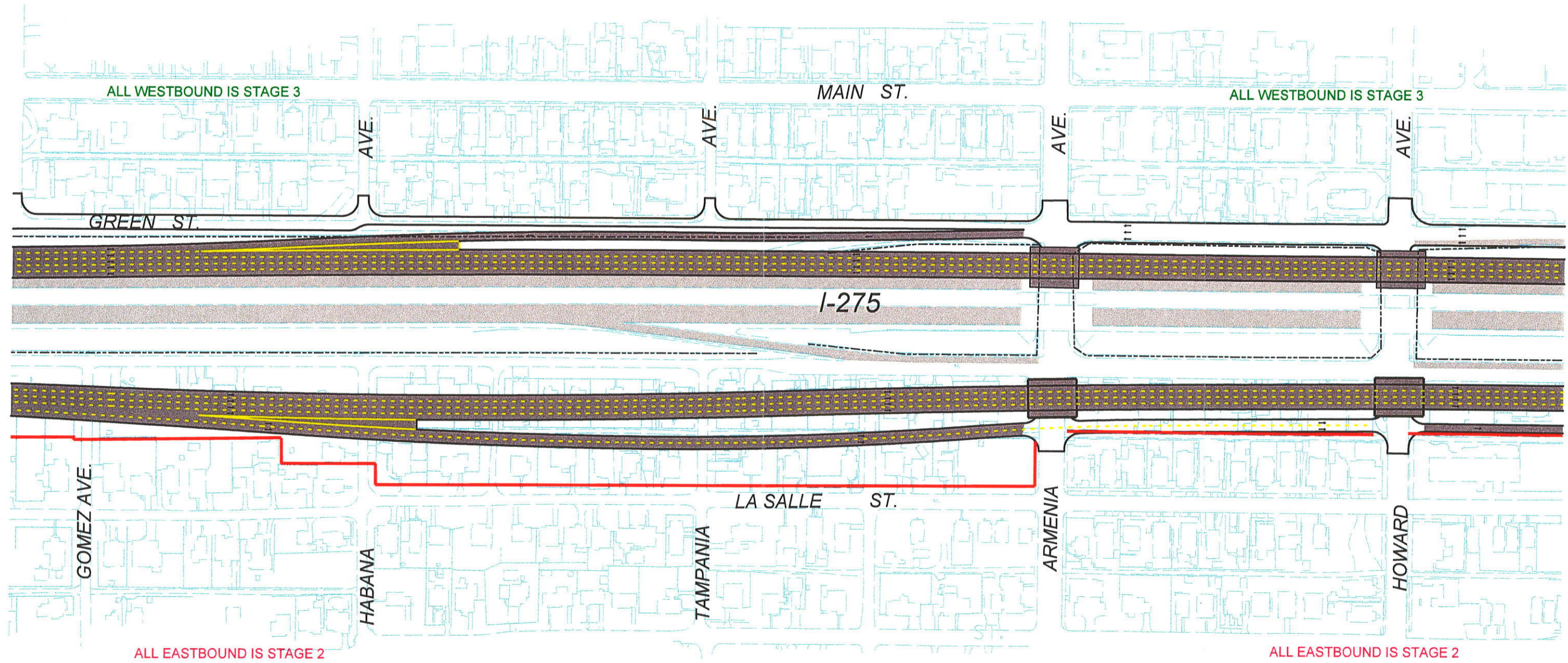
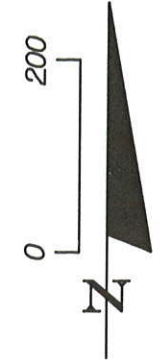


LEGEND

- Existing Roadway
- Proposed Roadway Improvements

I-275 SIMR
Hillsborough County, Florida

RECOMMENDED IMPROVEMENT CONCEPT



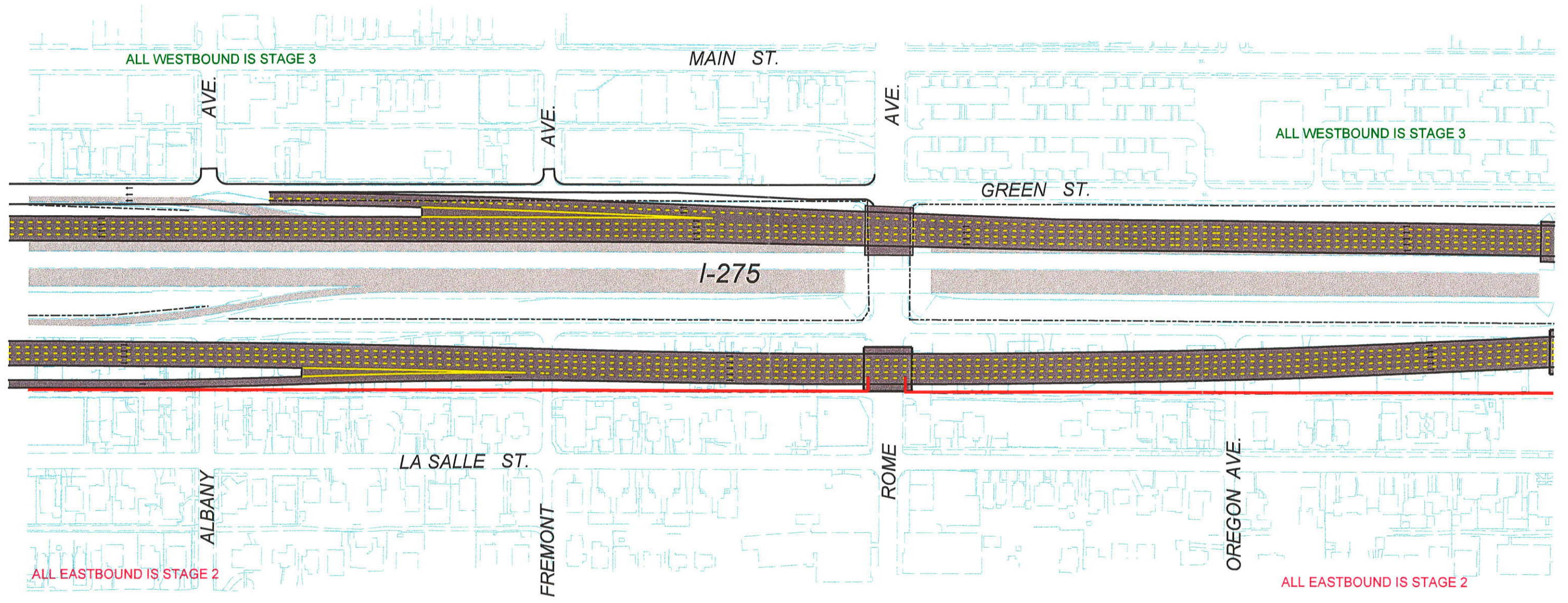
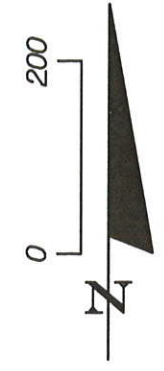
LEGEND

- Existing Roadway
- Proposed Roadway Improvements

I-275 SIMR
Hillsborough County, Florida

RECOMMENDED IMPROVEMENT CONCEPT

FLORIDA DEPARTMENT OF TRANSPORTATION



LEGEND

- Existing Roadway
- Proposed Roadway Improvements
- Existing Right of Way
- Proposed Right of Way

I-275 SIMR
Hillsborough County, Florida

RECOMMENDED IMPROVEMENT CONCEPT

FLORIDA DEPARTMENT OF TRANSPORTATION

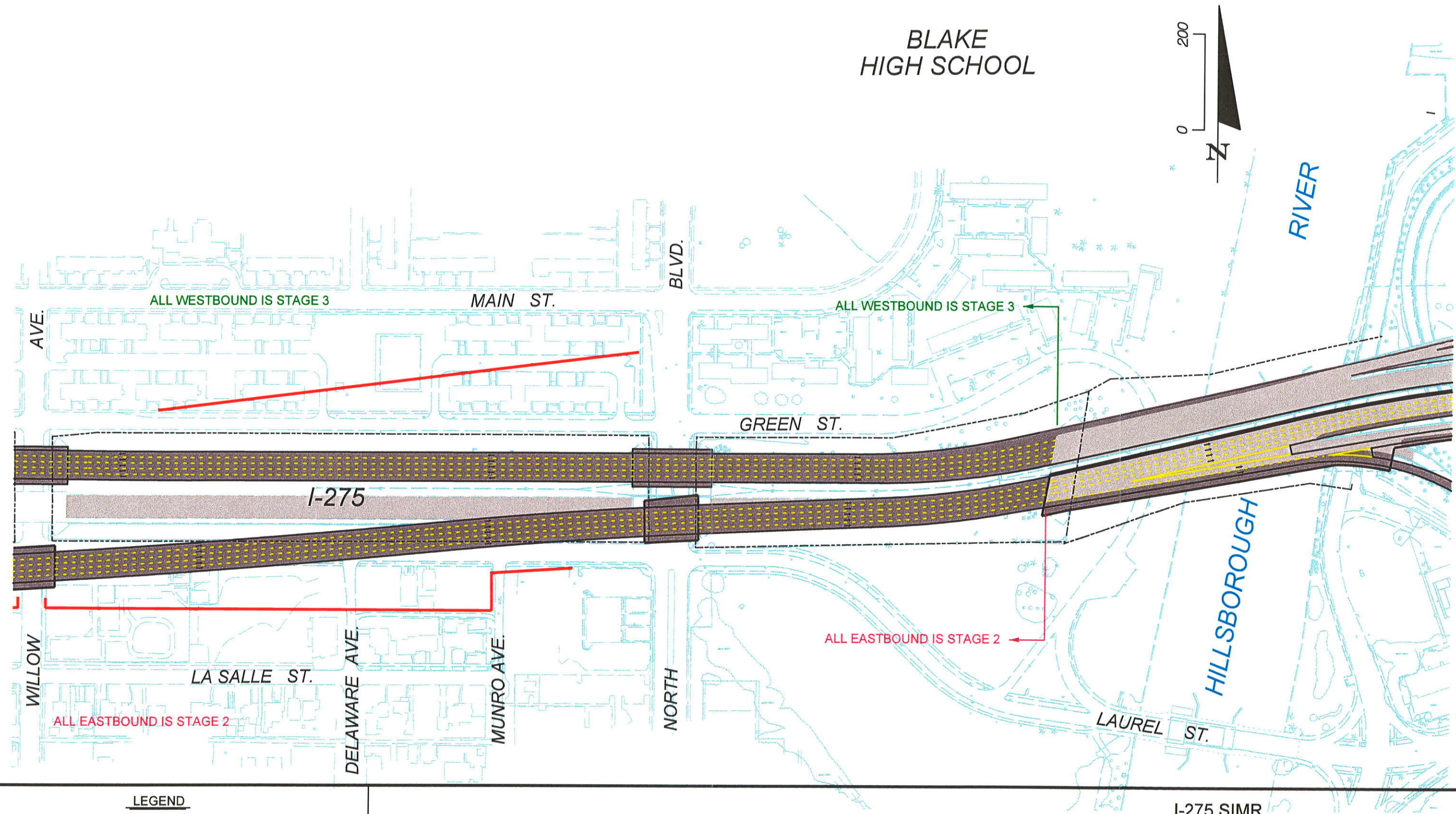
EXHIBIT 54

e:\LINKS\SIMR_2000\plan009.dgn

02/12/01

CivilMg

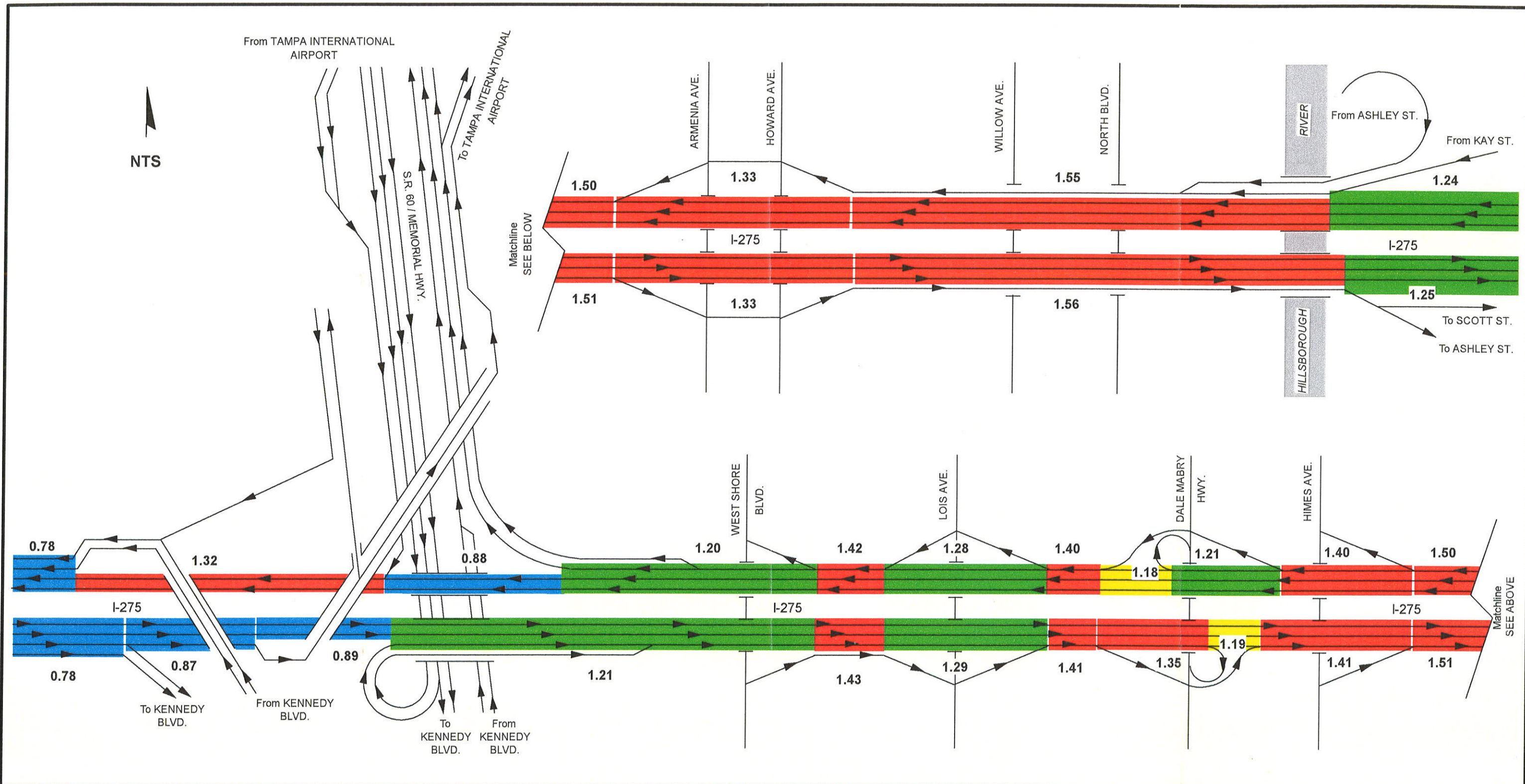
e:\LINKS\SIMR_2000\plan010.dgn
02/12/01
CivilMgr



LEGEND

Existing Roadway

Proposed Roadway Improvements



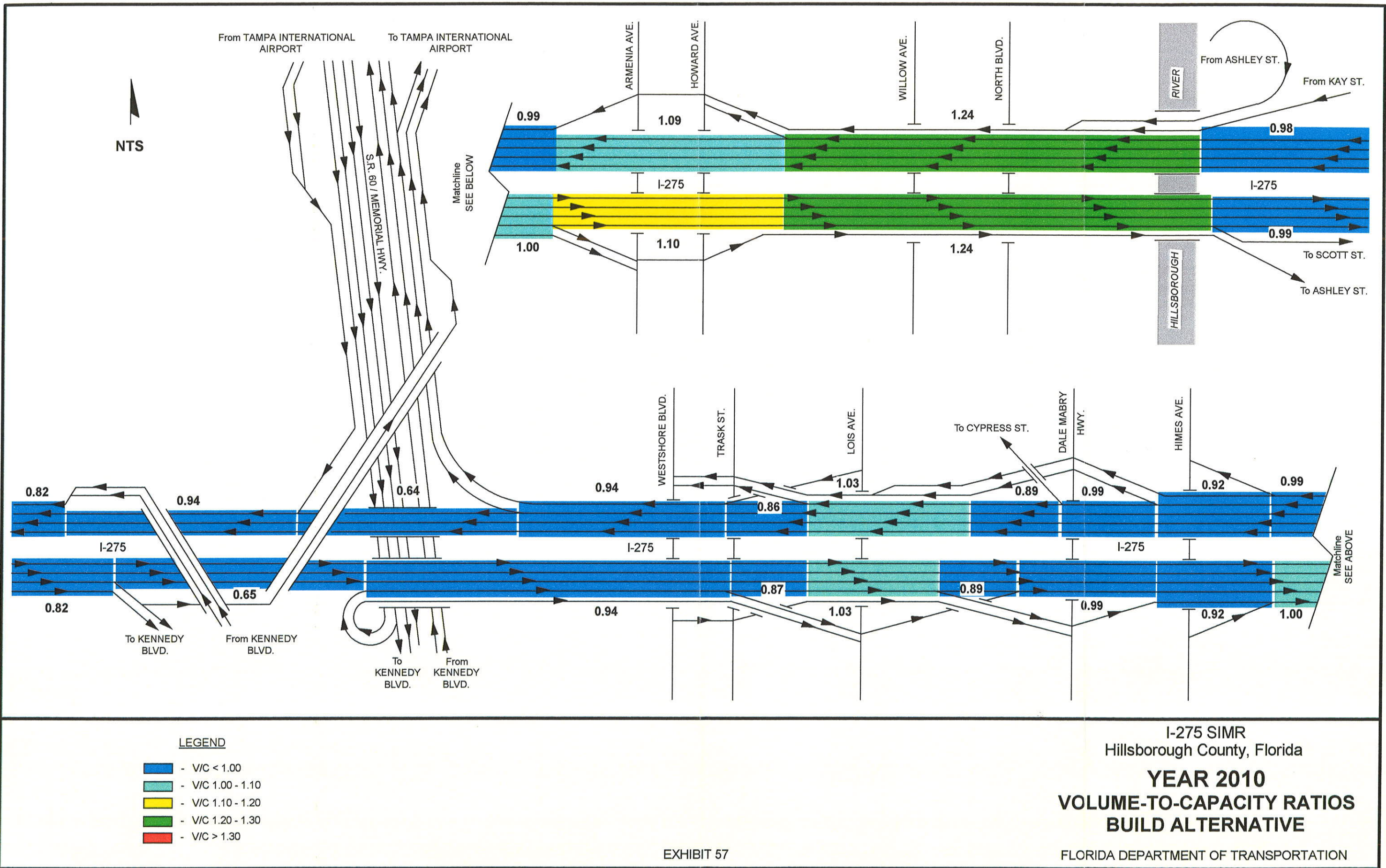
LEGEND

- V/C < 1.00
- V/C 1.00 - 1.10
- V/C 1.10 - 1.20
- V/C 1.20 - 1.30
- V/C > 1.30

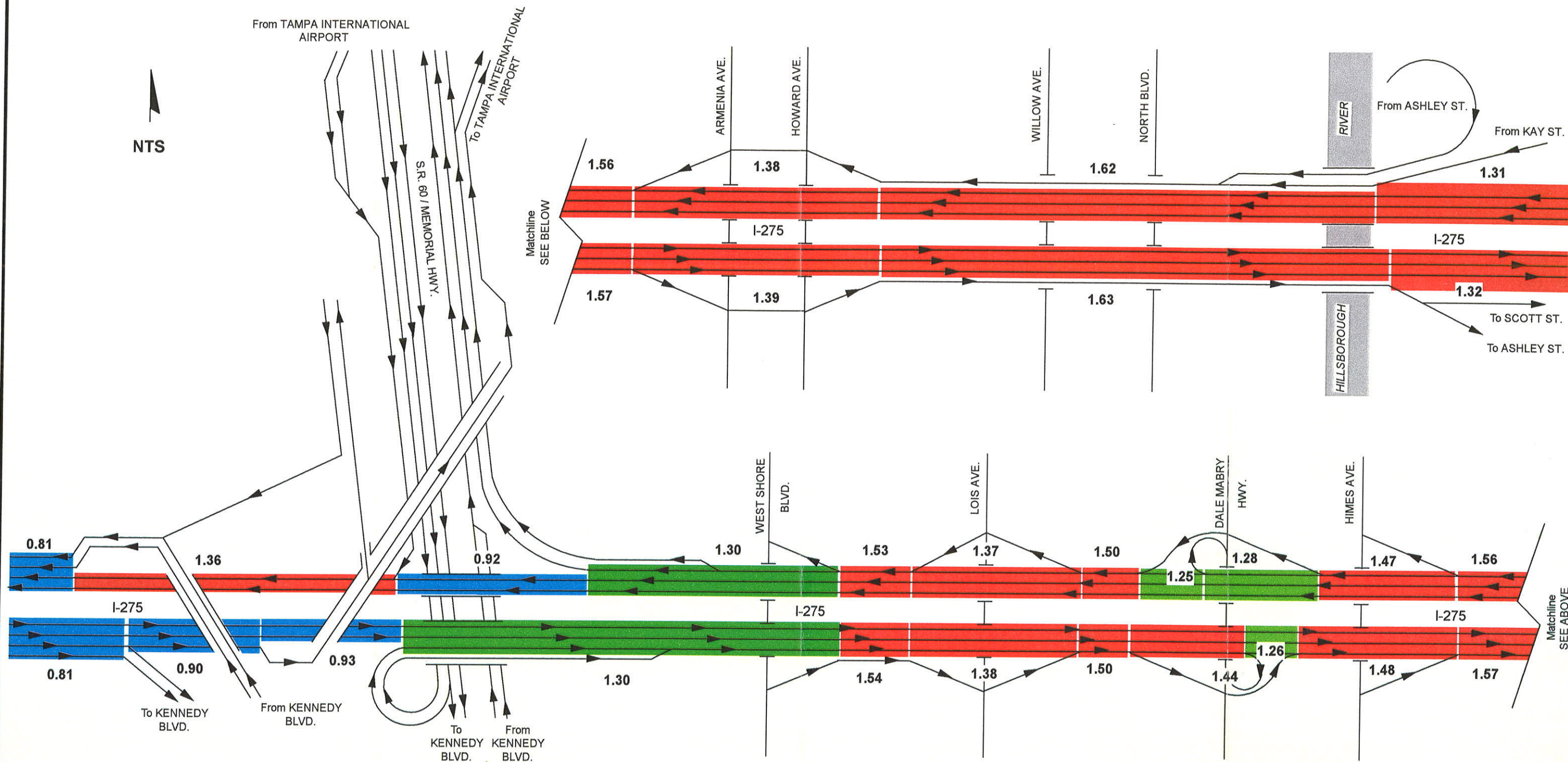
I-275 SIMR
Hillsborough County, Florida

**YEAR 2010
VOLUME-TO-CAPACITY RATIOS
NO-BUILD ALTERNATIVE**

FLORIDA DEPARTMENT OF TRANSPORTATION



NTS



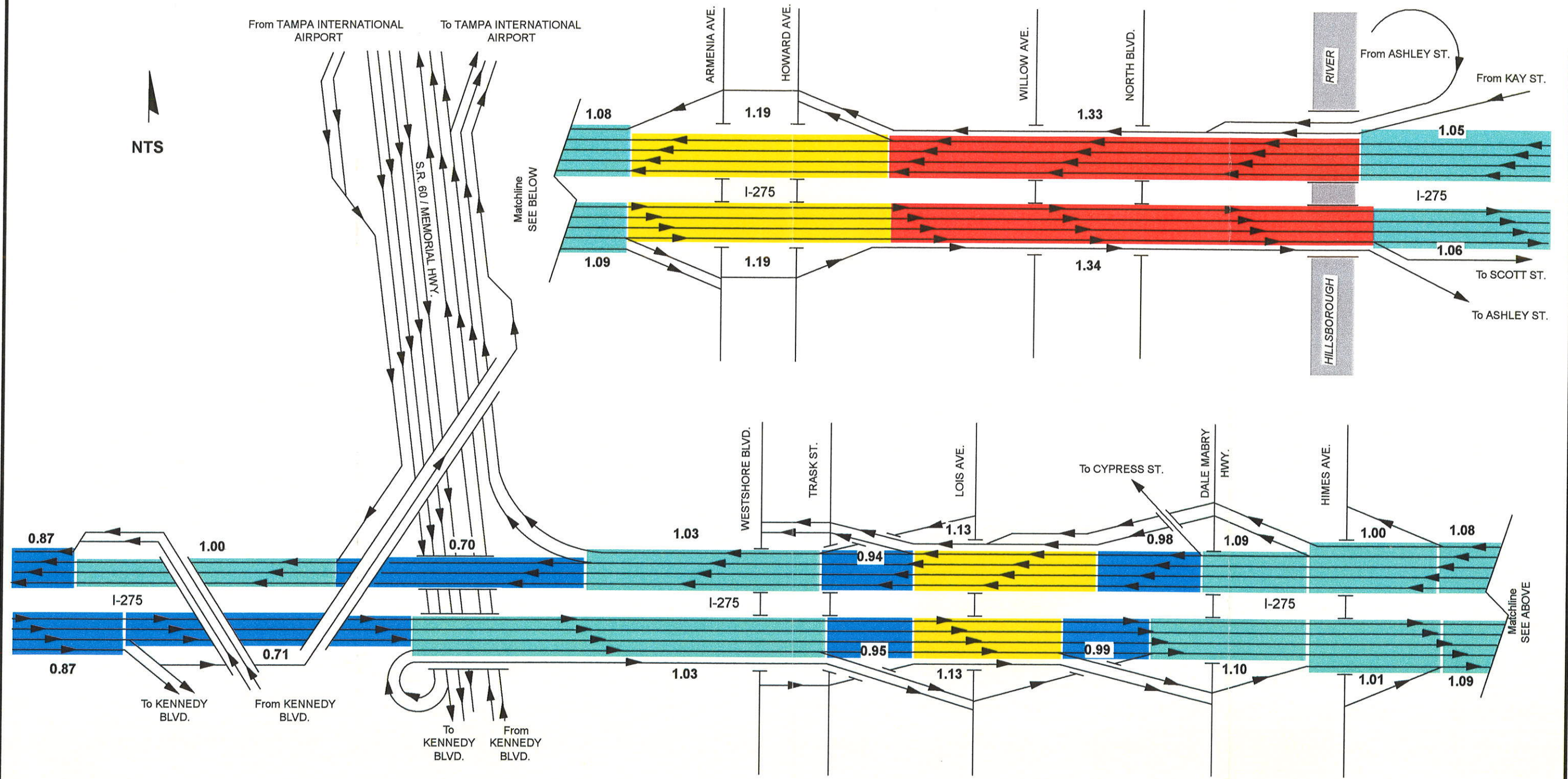
LEGEND

- V/C < 1.00
- V/C 1.00 - 1.10
- V/C 1.10 - 1.20
- V/C 1.20 - 1.30
- V/C > 1.30

I-275 SIMR
Hillsborough County, Florida

YEAR 2015
VOLUME-TO-CAPACITY RATIOS
NO-BUILD ALTERNATIVE

FLORIDA DEPARTMENT OF TRANSPORTATION

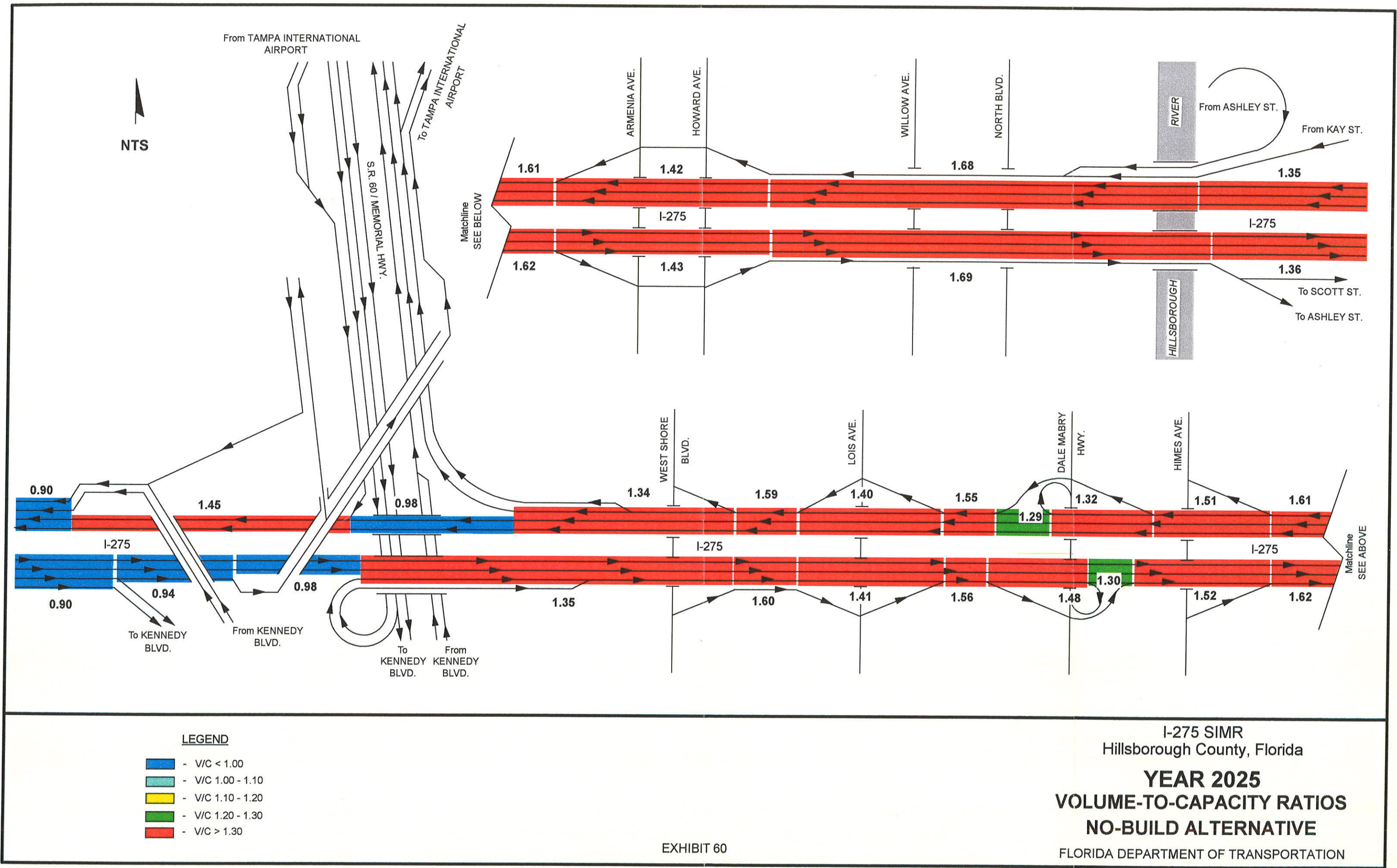


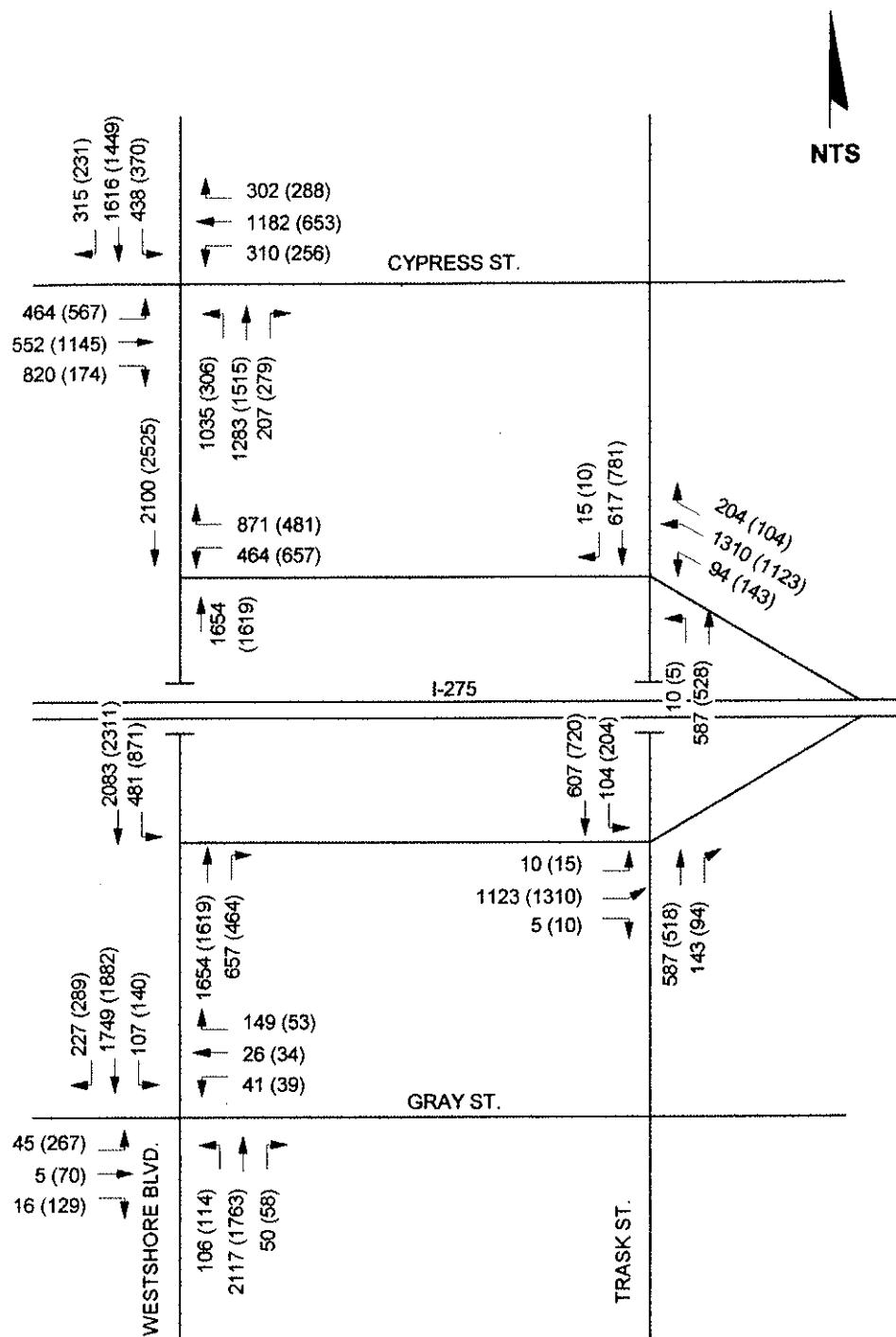
LEGEND

- V/C < 1.00
- V/C 1.00 - 1.10
- V/C 1.10 - 1.20
- V/C 1.20 - 1.30
- V/C > 1.30

I-275 SIMR
Hillsborough County, Florida

YEAR 2015
VOLUME-TO-CAPACITY RATIOS
BUILD ALTERNATIVE





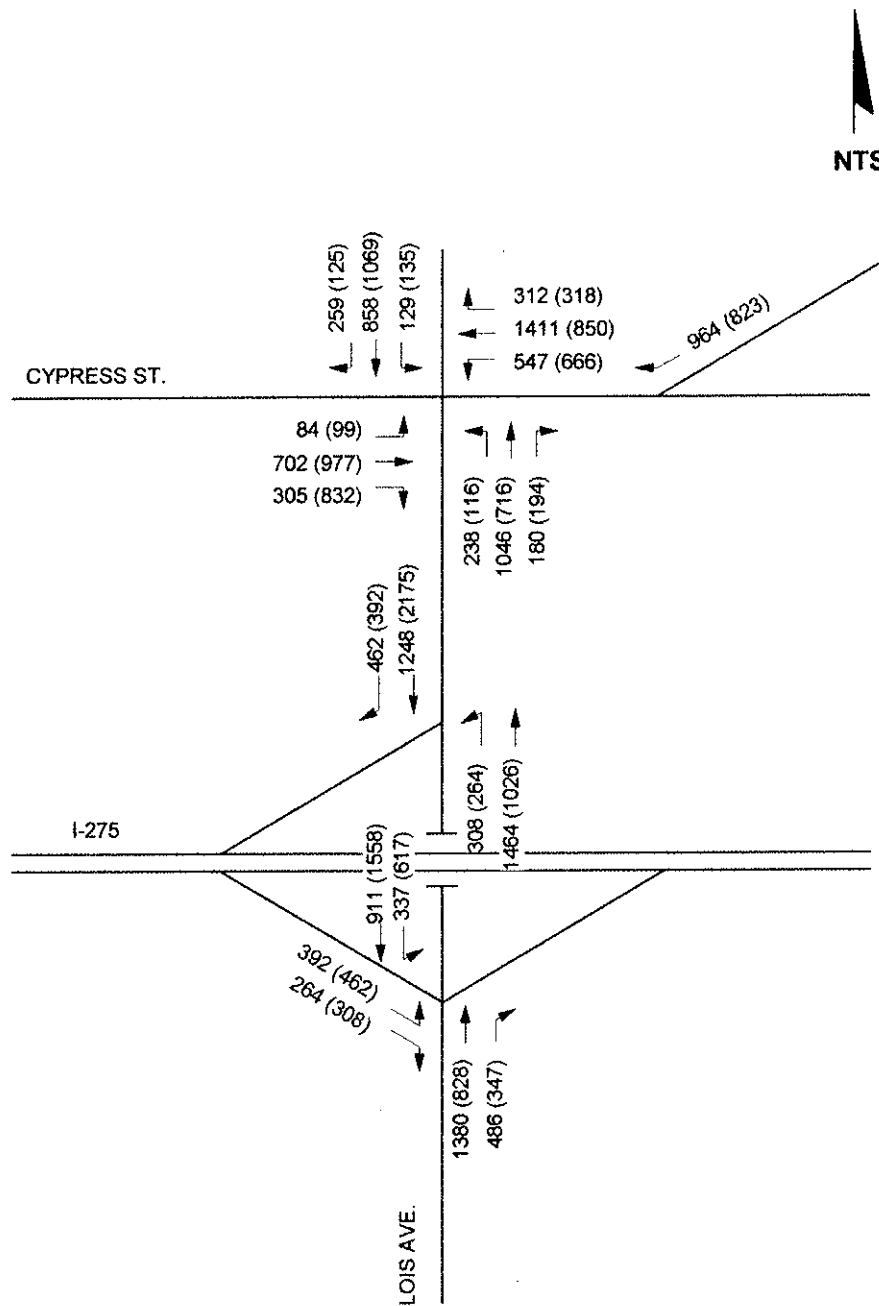
LEGEND

106 - AM Peak Hour Volume
(114) - PM Peak Hour Volume

I-275 SIMR
Hillsborough County, Florida

**YEAR 2015
DESIGN HOUR VOLUMES
I-275 / WESTSHORE BLVD.**

FLORIDA DEPARTMENT OF TRANSPORTATION

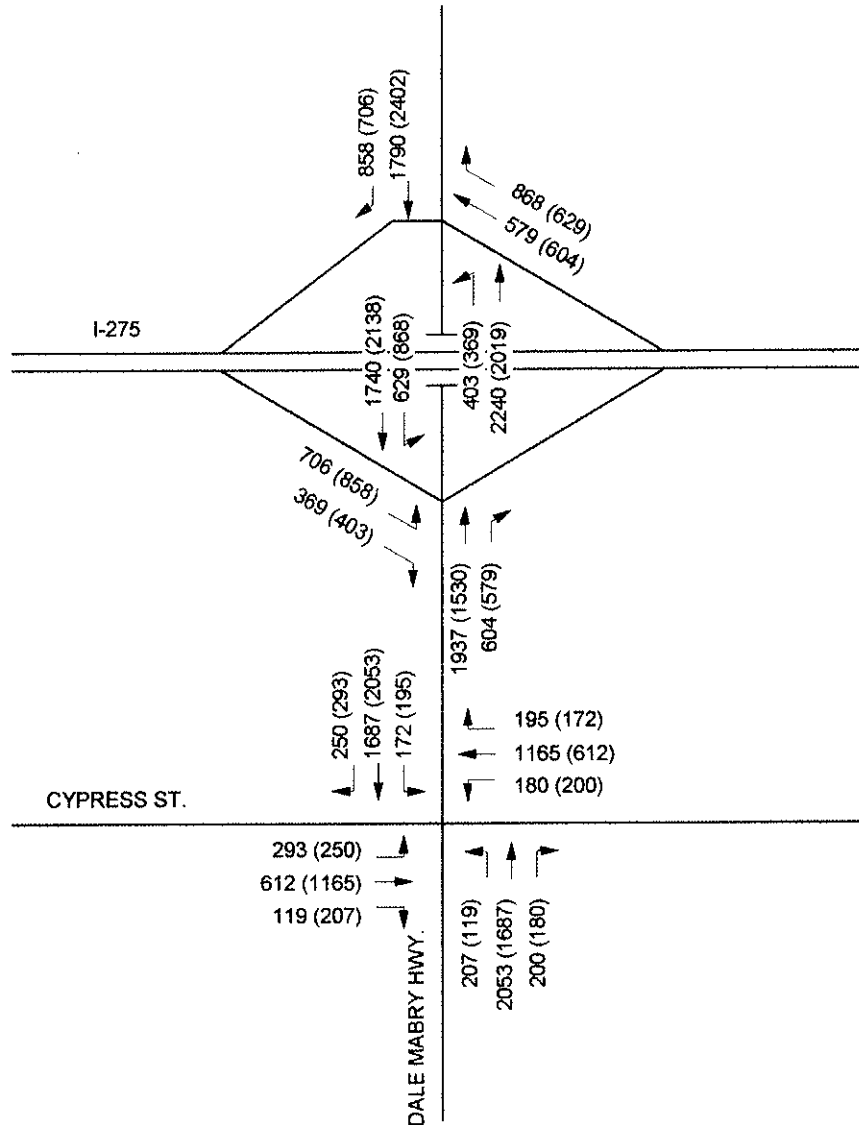


LEGEND

264 - AM Peak Hour Volume
 (308) - PM Peak Hour Volume

I-275 SIMR
 Hillsborough County, Florida
YEAR 2015
DESIGN HOUR VOLUMES
I-275 / LOIS AVE. / CYPRESS ST.

FLORIDA DEPARTMENT OF TRANSPORTATION

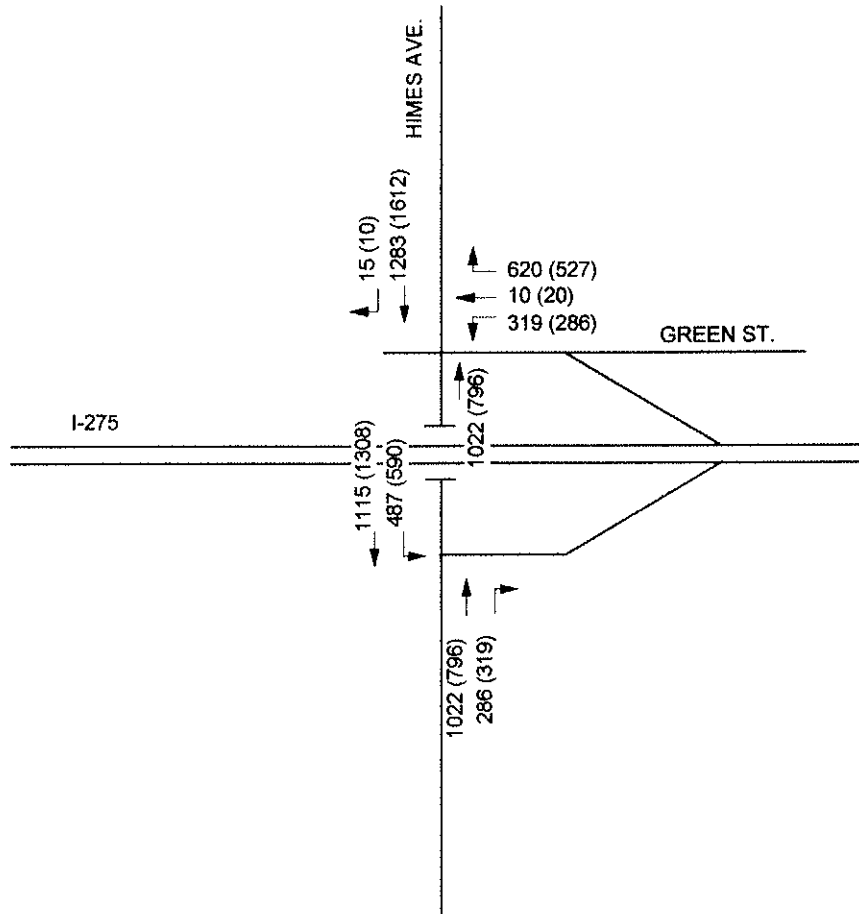


LEGEND

119 - AM Peak Hour Volume
(207) - PM Peak Hour Volume

I-275 SIMR
Hillsborough County, Florida
YEAR 2015
DESIGN HOUR VOLUMES
I-275 / DALE MABRY HWY.

FLORIDA DEPARTMENT OF TRANSPORTATION



LEGEND

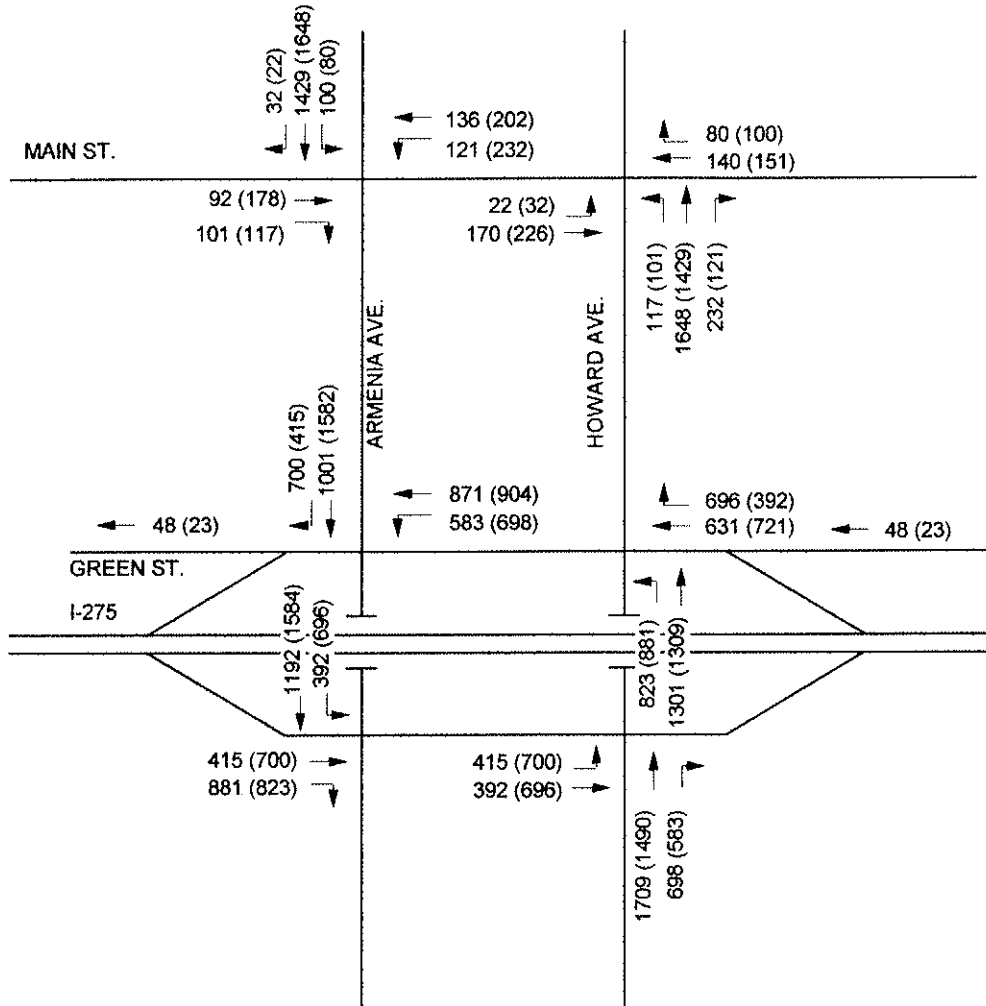
286 - AM Peak Hour Volume
(319) - PM Peak Hour Volume

I-275 SIMR
Hillsborough County, Florida

**YEAR 2015
DESIGN HOUR VOLUMES
I-275 / HIMES AVE.**

FLORIDA DEPARTMENT OF TRANSPORTATION

NTS



I-275 SIMR
Hillsborough County, Florida

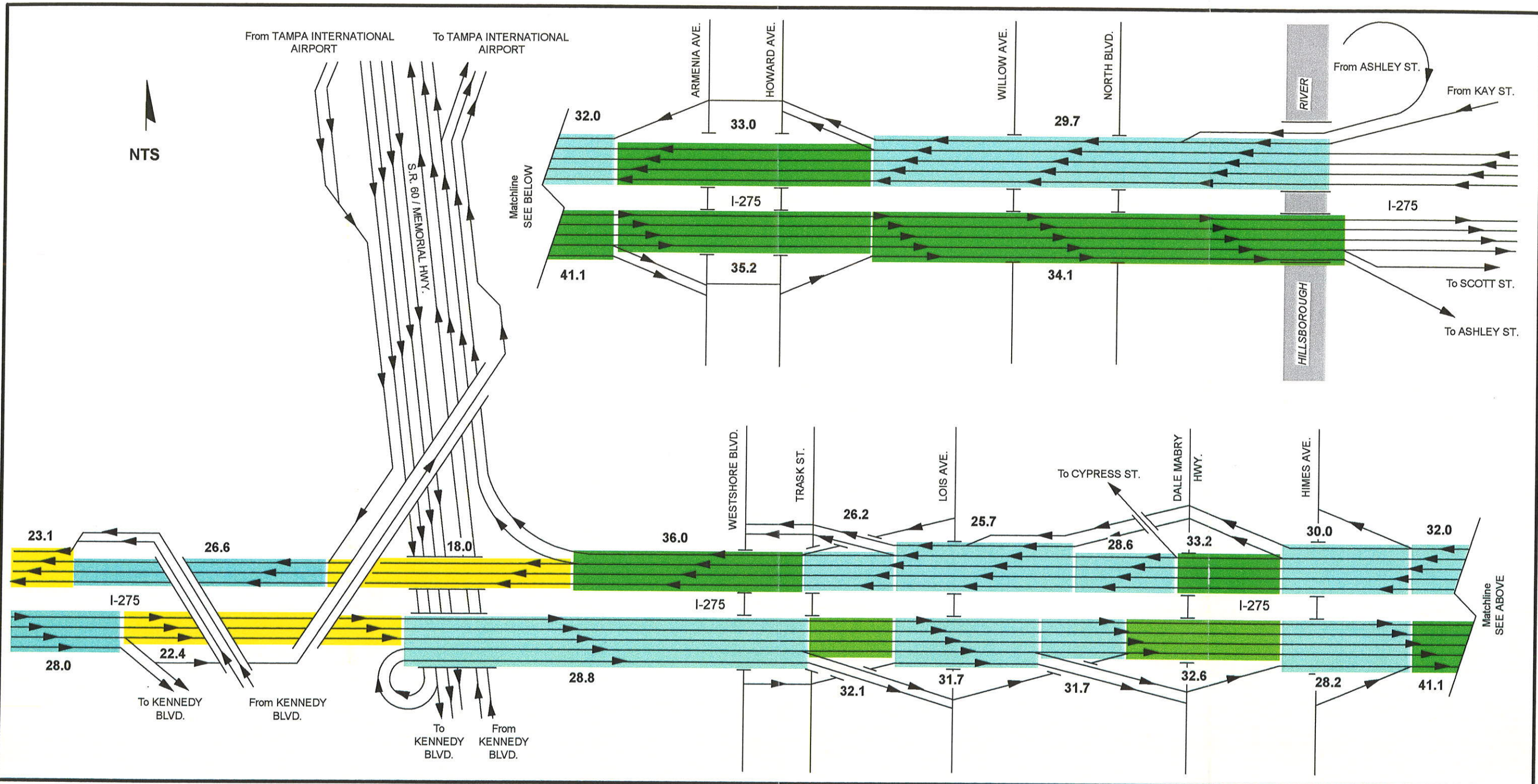
YEAR 2015

DESIGN HOUR VOLUMES

I-275 / ARMENIA AVE. / HOWARD AVE.

FLORIDA DEPARTMENT OF TRANSPORTATION

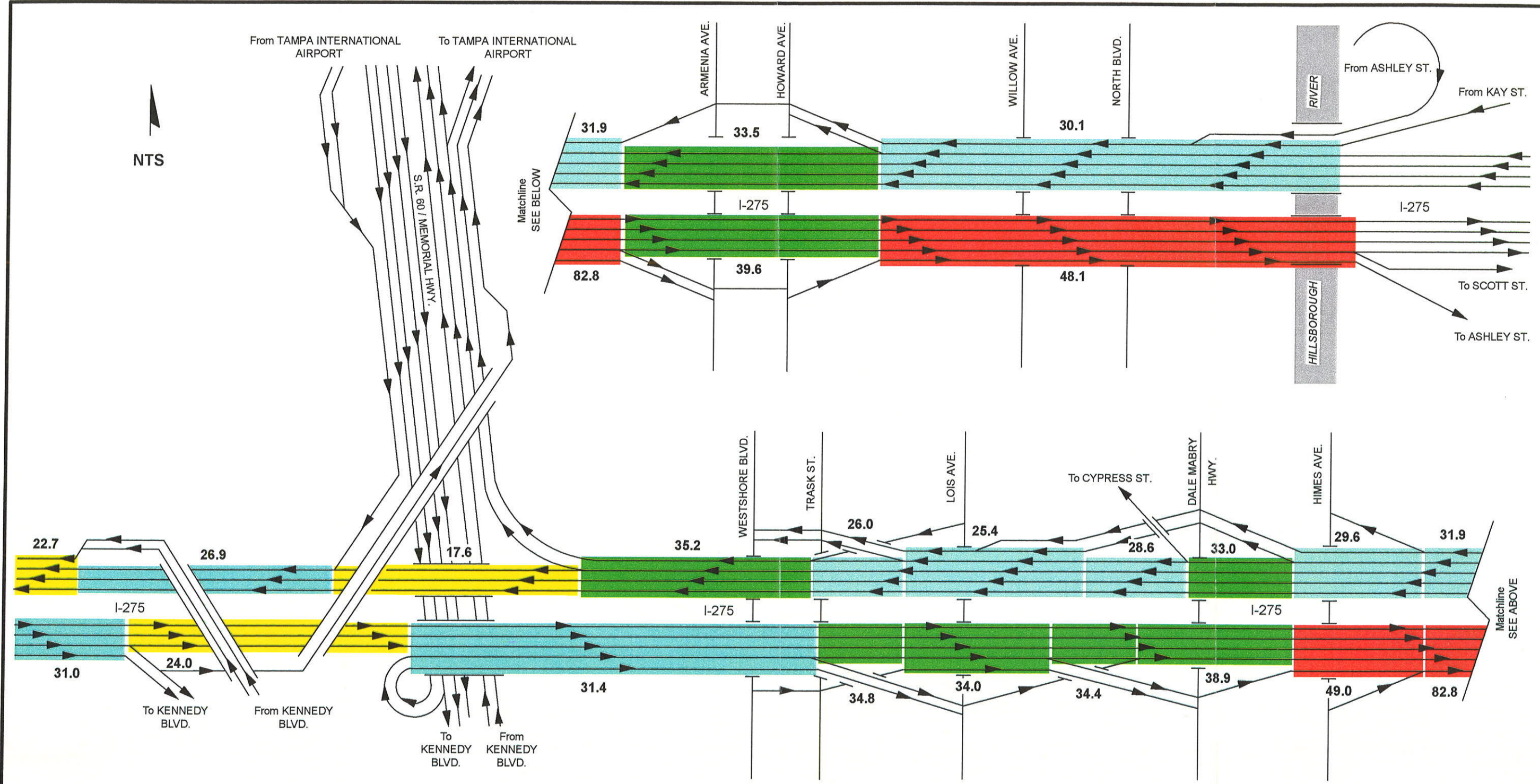
EXHIBIT 66



LEGEND

= Level of Service C
 = Level of Service D
 = Level of Service E
 = Level of Service F
28.0 = Average AM Peak Hour Density (in vehicles/lane-mile)

I-275 SIMR
 Hillsborough County, Florida
YEAR 2015 I-275 MAINLINE
DENSITIES AND LEVELS OF SERVICE
BUILD ALTERNATIVE
AM PEAK HOUR
 FLORIDA DEPARTMENT OF TRANSPORTATION



LEGEND

- Yellow = Level of Service C
- Light Blue = Level of Service D
- Green = Level of Service E
- Red = Level of Service F
- 31.0 = Average PM Peak Hour Density (in vehicles/lane-mile)

APPENDIX A - 2010 HCS ANALYSES

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: WEST OF KENNEDY OFF-RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	6773	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1782	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	1827	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	1827	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	62.4	mph
Number of Lanes, N	4	
Density, D	29.3	pc/mi/ln
Level of Service, LOS	D	

$$V/C \text{ Ratio} = 1827/2339 = 0.78$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: KENNEDY OFF / SR 60 OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	5625	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1480	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2023	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2023	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S	58.6	mph
Number of Lanes, N	3	
Density, D	34.5	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,023 / 2,324 = 0.87$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: SR 60 OFF / SR 60 ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	3795	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	999	v
Number of Lanes, N	2	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2047	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	2	
Number of Lanes Adjustment, fN	4.5	mph
Adjusted Free-Flow Speed	60.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2047	pcphpl
Adjusted Free-Flow Speed, FFS	60.9	mph
Average Passenger-Car Speed, S	56.7	mph
Number of Lanes, N	2	
Density, D	36.1	pc/mi/ln
Level of Service, LOS	E	

V/C Ratio = $2047/2309 = 0.89$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: SR 60 ON / WESTSHORE ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	7809	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2055	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2808	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2808	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S	24.7	mph
Number of Lanes, N	3	
Density, D	113.9	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,808 / 2,324 = 1.21$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: WESTSHORE ON / LOIS OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	9227	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2428	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3318	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3318	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS		
v/c Ratio = $3,318 / 2,324 = 1.43$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: LOIS OFF / LOIS ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8340	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2195	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2999	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2999	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $2,999/2,324 = 1.29$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: LOIS ON / SB DALE MABRY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	9108	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2397	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3276	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3276	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3,276 / 2,324 = 1.41$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: SB DALE OFF / NB DALE OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8707	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2291	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3131	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3131	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

V/c Ratio = $3,131 / 2,324 = 1.35$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: NB DALE OFF / DALE MABRY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	7693	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2024	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2767	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2767	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S	28.0	mph
Number of Lanes, N	3	
Density, D	98.9	pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $2,767 / 2,324 = 1.19$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: DALE MABRY ON / HIMES ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	9104	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2396	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3274	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3274	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
$V/C \text{ Ratio} = 3,274 / 2,324 = 1.41$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: HIMES ON / ARMENIA OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	9730	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2561	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3499	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3499	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3,499 / 2,324 = 1.51$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: ARMENIA OFF / HOWARD ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8615	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2267	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3098	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3098	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
$V/c \text{ Ratio} = 3,098 / 2,324 = 1.33$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: HOWARD ON / ASHLEY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	10068	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2649	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3621	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3621	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 3,621 / 2,324 = 1.56$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: EAST OF ASHLEY OFF-RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8087	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2128	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2908	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2908	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/c Ratio = $2,908/2,324 = 1.25$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: EAST OF ASHLEY ON-RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8087	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2128	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2908	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2908	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
$V/C Ratio = 2,908/2,336 = 1.24$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: ASHLEY ON / HOWARD OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	10068	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2649	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3621	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3621	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS		

$$V/C \text{ Ratio} = 3,621 / 2,336 = 1.55$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: ASHLEY ON / HOWARD OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	10068	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2649	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2716	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2716	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	26.4	mph
Number of Lanes, N	4	
Density, D	102.9	pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $2,716 / 2,351 = 1.16$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: HOWARD OFF / ARMENIA ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8615	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2267	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3098	pcphp1

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3098	pcphp1
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
$V/C \text{ Ratio} = 3,098/2,336 = 1.33$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: ARMENIA ON / HIMES OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	9730	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2561	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3499	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3499	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3,499 / 2,336 = 1.50$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: HIMES OFF / NB DALE MABRY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	9104	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2396	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3274	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3274	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3,274/2,336 = 1.40$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: NB DALE OFF / SB DALE OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	7885	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2075	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2836	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2836	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S	17.8	mph
Number of Lanes, N	3	
Density, D	159.6	pc/mi/ln
Level of Service, LOS	F	
$V/C \text{ Ratio} = 2,836 / 2,336 = 1.21$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SB DALE MABRY OFF / DALE ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	7693	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2024	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2767	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2767	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S	24.7	mph
Number of Lanes, N	3	
Density, D	112.0	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2767/2336 = 1.18$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: DALE MABRY ON / LOIS OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	9108	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2397	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3276	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3276	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$V/C Ratio = 3,276/2,336 = 1.40$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: LOIS OFF / LOIS ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8340	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2195	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2999	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2999	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,999 / 2,336 = 1.28$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: LOIS ON / WESTSHORE OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	9227	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2428	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3318	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3318	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 3318 / 2336 = 1.42$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: WESTSHORE OFF / SR 60 OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	7809	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2055	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2808	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2808	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S	20.7	mph
Number of Lanes, N	3	
Density, D	135.7	pc/mi/ln
Level of Service, LOS	F	

V/C Ratio = $2808/2336 = 1.20$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SR 60 OFF / SR 60 ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	3795	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	999	v
Number of Lanes, N	2	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2047	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	2	
Number of Lanes Adjustment, fN	4.5	mph
Adjusted Free-Flow Speed	62.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2047	pcphpl
Adjusted Free-Flow Speed, FFS	62.1	mph
Average Passenger-Car Speed, S	57.9	mph
Number of Lanes, N	2	
Density, D	35.4	pc/mi/ln
Level of Service, LOS	E	

$$V/C Ratio = 2047/2321 = 0.88$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SR 60 ON / KENNEDY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	5663	vp
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1490	v
Number of Lanes, N	2	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3055	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	2	
Number of Lanes Adjustment, fN	4.5	mph
Adjusted Free-Flow Speed	62.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3055	pcphpl
Adjusted Free-Flow Speed, FFS	62.1	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	2	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 3,055 / 2,321 = 1.32$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: WEST OF KENNEDY ON-RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 NO-BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	6773	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1782	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	1827	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	1827	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	63.6	mph
Number of Lanes, N	4	
Density, D	28.7	pc/mi/ln
Level of Service, LOS	D	

$$V/C \text{ Ratio} = 1827/2351 = 0.78$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: WEST OF KENNEDY OFF-RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	7131	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1877	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	1923	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	1923	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	61.5	mph
Number of Lanes, N	4	
Density, D	31.3	pc/mi/ln
Level of Service, LOS	D	

$$V/C \text{ Ratio} = 1923/2339 = 0.82$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: KENNEDY OFF / SR 60 ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	4180	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1100	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	1503	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	1503	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S	62.4	mph
Number of Lanes, N	3	
Density, D	24.1	pc/mi/ln
Level of Service, LOS	D	

$$V/C \text{ Ratio} = 1503/2324 = 0.65$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: SR 60 ON / LOIS OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8195	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2157	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2210	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2210	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	56.3	mph
Number of Lanes, N	4	
Density, D	39.3	pc/mi/ln
Level of Service, LOS	E	

$$\sqrt{C} \text{ Ratio} = 2210 / 2,339 = 0.94$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: WESTSHORE ON / DALE OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8935	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2351	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2410	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2410	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	49.0	mph
Number of Lanes, N	4	
Density, D	49.2	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2410/2339 = 1.03$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: DALE MABRY OFF / LOIS ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	7743	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2038	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2089	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2089	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	59.1	mph
Number of Lanes, N	4	
Density, D	35.4	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,089 / 2,339 = 0.89$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: LOIS ON / DALE MABRY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8603	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2264	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2321	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2321	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	52.7	mph
Number of Lanes, N	4	
Density, D	44.1	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,321 / 2,339 = 0.99$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: DALE MABRY ON / HIMES ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 7/26/00

VOLUME

Volume, V	10043	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2643	v
Number of Lanes, N	5	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2167	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	5	
Number of Lanes Adjustment, fN	0.0	mph
Adjusted Free-Flow Speed	65.4	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2167	pcphpl
Adjusted Free-Flow Speed, FFS	65.4	mph
Average Passenger-Car Speed, S	58.7	mph
Number of Lanes, N	5	
Density, D	36.9	pc/mi/ln
Level of Service, LOS	E	

$V/C \text{ Ratio} = 2167/2354 = 0.92$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: HIMES ON / ARMENIA OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	10890	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2866	v
Number of Lanes, N	5	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2350	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	5	
Number of Lanes Adjustment, fN	0.0	mph
Adjusted Free-Flow Speed	65.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2350	pcphpl
Adjusted Free-Flow Speed, FFS	65.4	mph
Average Passenger-Car Speed, S	52.5	mph
Number of Lanes, N	5	
Density, D	44.8	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2350/2354 = 1.00$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: ARMENIA OFF / HOWARD ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	9518	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2505	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2567	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2567	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	40.2	mph
Number of Lanes, N	4	
Density, D	63.9	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,567 / 2,339 = 1.10$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: HOWARD ON / ASHLEY/SCOTT OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 7/26/00

VOLUME

Volume, V	10790	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2839	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2910	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2910	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	4	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2910/2339 = 1.24$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: EAST OF SCOTT OFF-RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8550	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2250	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2306	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, flw	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2306	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	53.2	mph
Number of Lanes, N	4	
Density, D	43.3	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2306/2339 = 0.99$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: EAST OF ASHLEY ON-RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8550	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2250	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2306	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2306	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	54.1	mph
Number of Lanes, N	4	
Density, D	42.6	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,306/2351 = 0.98$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: ASHLEY ON / HOWARD OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	10790	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2839	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2910	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2910	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	2.2	mph
Number of Lanes, N	4	
Density, D	1345.1	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2910/2351 = 1.24$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: HOWARD OFF/ ARMENIA ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	9518	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2505	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2567	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2567	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	39.6	mph
Number of Lanes, N	4	
Density, D	64.9	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,567 / 2,351 = 1.09$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: ARMENIA ON / HIMES OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	10890	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2866	v
Number of Lanes, N	5	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2350	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	5	
Number of Lanes Adjustment, fN	0.0	mph
Adjusted Free-Flow Speed	66.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2350	pcphpl
Adjusted Free-Flow Speed, FFS	66.6	mph
Average Passenger-Car Speed, S	53.3	mph
Number of Lanes, N	5	
Density, D	44.1	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,350 / 2,366 = 0.99$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: HIMES OFF / DALE MABRY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 7/26/00

VOLUME

Volume, V	10043	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2643	v
Number of Lanes, N	5	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2167	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	5	
Number of Lanes Adjustment, fN	0.0	mph
Adjusted Free-Flow Speed	66.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2167	pcphpl
Adjusted Free-Flow Speed, FFS	66.6	mph
Average Passenger-Car Speed, S	59.4	mph
Number of Lanes, N	5	
Density, D	36.5	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,167 / 2,366 = 0.92$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: DALE MABRY OFF / CYPRESS OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8603	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2264	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2321	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2321	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	53.5	mph
Number of Lanes, N	4	
Density, D	43.4	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2321/2351 = 0.99$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: CYPRESS OFF / DALE MABRY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	7743	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2038	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2089	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2089	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	60.3	mph
Number of Lanes, N	4	
Density, D	34.6	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,089 / 2,351 = 0.89$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: DALE MABRY ON / WESTSHORE OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8935	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2351	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2410	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2410	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	49.4	mph
Number of Lanes, N	4	
Density, D	48.8	pc/mi/ln
Level of Service, LOS	F	

$$V/c \text{ Ratio} = 2,410/2,351 = 1.03$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: WESTSHORE OFF / LOIS ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	7508	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1976	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2025	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2025	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	61.5	mph
Number of Lanes, N	4	
Density, D	33.0	pc/mi/ln
Level of Service, LOS	E	

$$v/c \text{ Ratio} = 2,025 / 2,351 = 0.86$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: LOIS ON / SR 60 OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	8195	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2157	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2210	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2210	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	57.4	mph
Number of Lanes, N	4	
Density, D	38.5	pc/mi/ln
Level of Service, LOS	E	

$$V/c \text{ Ratio} = 2210 / 2351 = 0.94$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SR 60 OFF / SR 60 ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	4180	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1100	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	1503	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	1503	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S	63.3	mph
Number of Lanes, N	3	
Density, D	23.8	pc/mi/ln
Level of Service, LOS	C	

$$V/C \text{ Ratio} = 1503/2336 = 0.64$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SR 60 ON / KENNEDY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	6092	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1603	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2191	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2191	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S	56.5	mph
Number of Lanes, N	3	
Density, D	38.8	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2191/2336 = 0.94$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: WEST OF KENNEDY ON-RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2010 BUILD
Date Performed: 5/15/00

VOLUME

Volume, V	7131	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1877	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	1923	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	1923	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	62.8	mph
Number of Lanes, N	4	
Density, D	30.6	pc/mi/ln
Level of Service, LOS	D	

$$V/C \text{ Ratio} = 1923/2351 = 0.82$$

APPENDIX B - 2015 HCS ANALYSES

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: WEST OF KENNEDY OFF RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	7038	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1852	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	1898	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	1898	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	61.8	mph
Number of Lanes, N	4	
Density, D	30.7	pc/mi/ln
Level of Service, LOS	D	

$$V/C \text{ Ratio} = 1898/2339 = 0.81$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: KENNEDY OFF / SR 60 OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	5799	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1526	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2086	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2086	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S	57.6	mph
Number of Lanes, N	3	
Density, D	36.2	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,086 / 2,324 = 0.90$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: SR 60 OFF / SR 60 ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	3966	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1044	v
Number of Lanes, N	2	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2140	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	2	
Number of Lanes Adjustment, fN	4.5	mph
Adjusted Free-Flow Speed	60.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2140	pcphpl
Adjusted Free-Flow Speed, FFS	60.9	mph
Average Passenger-Car Speed, S	55.1	mph
Number of Lanes, N	2	
Density, D	38.8	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2140/2309 = 0.93$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: SR 60 ON / WEST SHORE ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8425	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2217	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3030	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3030	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/c \text{ Ratio} = 3,030 / 2,324 = 1.30$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: WEST SHORE ON / LOIS OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9941	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2616	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3575	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3575	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
$V/C Ratio = 3,575 / 2,324 = 1.54$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: LOIS OFF / LOIS ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8888	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2339	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3197	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3197	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/c \text{ Ratio} = 3,197/2,324 = 1.38$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: LOIS ON / SB DALE MABRY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9722	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2558	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3497	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, flw	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3497	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/c Ratio = $3497/2324 = 1.50$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: SB DALE OFF / NB DALE OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9275	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2441	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3336	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3336	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS		

$$V/C \text{ Ratio} = 3336/2324 = 1.44$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: NB DALE OFF / DALE MABRY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8145	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2143	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2929	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2929	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2929/2324 = 1.26$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: DALE MABRY ON / HIMES ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9551	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2513	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3435	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3435	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 3,435 / 2,324 = 1.48$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: HIMES ON / ARMENIA OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10146	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2670	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3649	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3649	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
$V/C \text{ Ratio} = 3649/2324 = 1.57$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: ARMENIA OFF / HOWARD ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8988	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2365	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3233	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3233	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 3,233/2,324 = 1.39$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: HOWARD ON / ASHLEY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10524	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2769	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3785	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3785	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3785/2324 = 1.63$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: EAST OF ASHLEY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8515	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2241	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3062	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3062	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 3062/2324 = 1.32$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: EAST OF ASHLEY ON RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8515	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2241	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3062	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3062	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS		

$$V/C \text{ Ratio} = 3062 / 2336 = 1.31$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: ASHLEY ON / HOWARD OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10524	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2769	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3785	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3785	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

V/c Ratio = $3785/2336 = 1.62$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: HOWARD OFF / ARMENIA ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8988	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2365	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3233	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3233	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 3233/2,336 = 1.38$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: ARMENIA ON / HIMES OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10146	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2670	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3649	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3649	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 3,649 / 2,336 = 1.56$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: HIMES OFF / NB DALE MABRY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9551	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2513	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3435	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3435	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3435/2336 = 1.47$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: NB DALE OFF / SB DALE OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8336	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2194	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2998	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2998	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2998/2336 = 1.28$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SB DALE OFF / DALE MABRY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8145	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2143	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2929	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2929	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,929 / 2,336 = 1.25$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: DALE MABRY ON / LOIS OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9722	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2558	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3497	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3497	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/c \text{ Ratio} = 3497/2336 = 1.50$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: LOIS OFF / LOIS ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8888	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2339	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3197	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3197	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 3197/2336 = 1.37$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: LOIS ON / WESTSHORE OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9941	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2616	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3575	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3575	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 3,575 / 2,336 = 1.53$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: WEST SHORE OFF / SR 60 OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8425	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2217	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3030	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3030	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
VIC Ratio = $3030 / 2,336 = 1.30$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SR 60 OFF / SR 60 ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	3966	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1044	v
Number of Lanes, N	2	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2140	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	2	
Number of Lanes Adjustment, fN	4.5	mph
Adjusted Free-Flow Speed	62.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2140	pcphpl
Adjusted Free-Flow Speed, FFS	62.1	mph
Average Passenger-Car Speed, S	56.2	mph
Number of Lanes, N	2	
Density, D	38.1	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,140 / 2,321 = 0.92$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SR 60 ON / KENNEDY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	5852	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1540	v
Number of Lanes, N	2	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fhv	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3157	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, flw	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, flc	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fid	3.4	mph
Number of Lanes, N	2	
Number of Lanes Adjustment, fn	4.5	mph
Adjusted Free-Flow Speed	62.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3157	pcphpl
Adjusted Free-Flow Speed, FFS	62.1	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	2	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/c \text{ Ratio} = 3157 / 2,321 = 1.36$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: WEST OF KENNEDY ON RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	7038	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1852	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	1898	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	1898	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	63.0	mph
Number of Lanes, N	4	
Density, D	30.1	pc/mi/ln
Level of Service, LOS	D	

VIC Ratio = $1,898 / 2,351 = 0.81$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: WEST OF KENNEDY OFF RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	7545	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1986	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2035	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2035	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	60.0	mph
Number of Lanes, N	4	
Density, D	33.9	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,035 / 2,339 = 0.87$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: KENNEDY OFF / SR 60 ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	4566	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1202	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	1642	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	1642	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S	61.8	mph
Number of Lanes, N	3	
Density, D	26.6	pc/mi/ln
Level of Service, LOS	D	

V/C Ratio = $1,642 / 2,324 = 0.71$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: SR 60 ON / LOIS OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	8972	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2361	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2420	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2420	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	48.5	mph
Number of Lanes, N	4	
Density, D	49.9	pc/mi/ln
Level of Service, LOS	F	

$$V/c \text{ Ratio} = 2,420/2,339 = 1.03$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: LOIS OFF / WEST SHORE ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	8202	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2158	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2212	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2212	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	56.2	mph
Number of Lanes, N	4	
Density, D	39.4	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,212 / 2,339 = 0.95$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: WEST SHORE ON / DALE MABRY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	9810	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2582	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2646	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2646	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	34.5	mph
Number of Lanes, N	4	
Density, D	76.8	pc/mi/ln
Level of Service, LOS	F	

$$V/c \text{ Ratio} = 2646/2339 = 1.13$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: DALE MABRY OFF / LOIS ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	8549	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2250	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2306	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, flw	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2306	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	53.2	mph
Number of Lanes, N	4	
Density, D	43.3	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,306/2,339 = 0.99$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: LOIS ON / DALE MABRY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	9513	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2503	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2566	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2566	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	40.2	mph
Number of Lanes, N	4	
Density, D	63.8	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,566 / 2,339 = 1.10$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: DALE MABRY ON / HIMES ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 7/26/00

VOLUME

Volume, V	10960	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2884	v
Number of Lanes, N	5	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2365	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	5	
Number of Lanes Adjustment, fN	0.0	mph
Adjusted Free-Flow Speed	65.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2365	pcphpl
Adjusted Free-Flow Speed, FFS	65.4	mph
Average Passenger-Car Speed, S	51.8	mph
Number of Lanes, N	5	
Density, D	45.6	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,365 / 2,354 = 1.01$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: HIMES ON / ARMENIA OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	11869	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	3123	v
Number of Lanes, N	5	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fhv	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2561	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	5	
Number of Lanes Adjustment, fN	0.0	mph
Adjusted Free-Flow Speed	65.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2561	pcphpl
Adjusted Free-Flow Speed, FFS	65.4	mph
Average Passenger-Car Speed, S	40.3	mph
Number of Lanes, N	5	
Density, D	63.6	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,561 / 2,354 = 1.09$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: ARMENIA OFF / HOWARD ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	10346	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2723	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2791	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2791	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	21.4	mph
Number of Lanes, N	4	
Density, D	130.6	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,791 / 2,339 = 1.19$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: HOWARD ON / ASHLEY/SCOTT OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 7/26/00

VOLUME

Volume, V	11625	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	3059	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3136	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3136	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	4	
Density, D		pc/mi/ln
Level of Service, LOS	F	

VIC Ratio = $3,136 / 2,339 = 1.34$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: EAST OF SCOTT OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	9153	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2409	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2469	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2469	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	46.0	mph
Number of Lanes, N	4	
Density, D	53.7	pc/mi/ln
Level of Service, LOS	F	

$$V/c Ratio = 2,469 / 2,339 = 1.06$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: EAST OF ASHLEY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	9153	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2409	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2469	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2469	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	46.2	mph
Number of Lanes, N	4	
Density, D	53.5	pc/mi/ln
Level of Service, LOS	F	

V/c Ratio = $2,469 / 2,351 = 1.05$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: ASHLEY ON / HOWARD OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	11625	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	3059	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3136	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3136	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	4	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 3136 / 2351 = 1.33$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: HOWARD OFF / ARMENIA ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	10346	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2723	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2791	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2791	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	18.1	mph
Number of Lanes, N	4	
Density, D	154.4	pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $2791/2351 = 1.19$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: ARMENIA ON / HIMES OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	11869	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	3123	v
Number of Lanes, N	5	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2561	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	5	
Number of Lanes Adjustment, fN	0.0	mph
Adjusted Free-Flow Speed	66.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2561	pcphpl
Adjusted Free-Flow Speed, FFS	66.6	mph
Average Passenger-Car Speed, S	41.2	mph
Number of Lanes, N	5	
Density, D	62.1	pc/mi/ln
Level of Service, LOS	F	

V/C Ratio = $2,561/2,366 = 1.08$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: HIMES OFF / DALE MABRY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 7/26/00

VOLUME

Volume, V	10960	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2884	v
Number of Lanes, N	5	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2365	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	5	
Number of Lanes Adjustment, fN	0.0	mph
Adjusted Free-Flow Speed	66.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2365	pcphpl
Adjusted Free-Flow Speed, FFS	66.6	mph
Average Passenger-Car Speed, S	52.6	mph
Number of Lanes, N	5	
Density, D	44.9	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,365 / 2,366 = 1.00$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: DALE MABRY OFF / CYPRESS OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	9513	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2503	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2566	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2566	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	39.7	mph
Number of Lanes, N	4	
Density, D	64.7	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,566 / 2,351 = 1.09$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: CYPRESS OFF / DALE MABRY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	8549	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2250	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2306	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2306	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	54.1	mph
Number of Lanes, N	4	
Density, D	42.6	pc/mi/ln
Level of Service, LOS	E	

V/C Ratio = $2306/2351 = 0.98$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: DALE MABRY ON / WEST SHORE OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	9810	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2582	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2646	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2646	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	33.1	mph
Number of Lanes, N	4	
Density, D	79.9	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,646 / 2,351 = 1.13$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: WEST SHORE OFF / LOIS ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	8202	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2158	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2212	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2212	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	57.3	mph
Number of Lanes, N	4	
Density, D	38.6	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,212/2,351 = 0.94$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: LOIS ON / SR 60 OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	8972	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2361	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2420	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, flw	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2420	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	48.9	mph
Number of Lanes, N	4	
Density, D	49.5	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,420 / 2,351 = 1.03$$

URS
 7650 WEST COURTNEY CAMPBELL CSWY
 TAMPA, FLORIDA

Phone: (813) 286-1711
 E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
 From/To: SR 60 OFF / SR 60 ON
 Agency or Company: URS
 Analyst: DEA
 Analysis Time Period: DESIGN HOUR
 Jurisdiction:
 Analysis Year: 2015 BUILD
 Date Performed: 5/1/00

VOLUME

Volume, V	4566	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1202	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	1642	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	1642	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S	62.9	mph
Number of Lanes, N	3	
Density, D	26.1	pc/mi/ln
Level of Service, LOS	D	

$V/C \text{ Ratio} = 1,642 / 2,336 = 0.70$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SR 60 ON / KENNEDY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	6494	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1709	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2336	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, flw	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2336	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S	51.9	mph
Number of Lanes, N	3	
Density, D	45.0+	pc/mi/ln
Level of Service, LOS	F	

V/c Ratio = $2,336/2,336 = 1.00$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: WEST OF KENNEDY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2015 BUILD
Date Performed: 5/1/00

VOLUME

Volume, V	7545	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1986	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fhv	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2035	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2035	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	61.3	mph
Number of Lanes, N	4	
Density, D	33.2	pc/mi/ln
Level of Service, LOS	E	

$$v/c \text{ Ratio} = 2,035 / 2,351 = 0.87$$

ARRETRATI

APPENDIX C - 2025 HCS ANALYSES

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: WEST OF KENNEDY OFF RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	7842	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2064	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2115	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2115	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	58.6	mph
Number of Lanes, N	4	
Density, D	36.1	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2115 / 2339 = 0.90$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: KENNEDY OFF / SR60 OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	6096	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1604	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2192	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2192	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S	55.4	mph
Number of Lanes, N	3	
Density, D	39.6	pc/mi/ln
Level of Service, LOS	E	

V/C Ratio = $2,192 / 2,324 = 0.94$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: SR 60 OFF / SR 60 ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	4205	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1107	v
Number of Lanes, N	2	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2268	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	2	
Number of Lanes Adjustment, fN	4.5	mph
Adjusted Free-Flow Speed	60.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2268	pcphpl
Adjusted Free-Flow Speed, FFS	60.9	mph
Average Passenger-Car Speed, S	52.4	mph
Number of Lanes, N	2	
Density, D	43.3	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2268/2309 = 0.98$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: SR 60 ON / WEST SHORE ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8691	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2287	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3126	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3126	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
$V/C \text{ Ratio} = 3,126 / 2,324 = 1.35$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: WEST SHORE ON / LOIS OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10312	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2714	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3709	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3709	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/c Ratio = 3,709/2,324 = 1.60		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: LOIS OFF / LOIS ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9091	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2392	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3270	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3270	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$V/C \text{ Ratio} = 3,270 / 2,324 = 1.41$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: LOIS ON / SB DALE MABRY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10067	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2649	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3621	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3621	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/c Ratio = $3,621 / 2,324 = 1.56$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: DALE MABRY SB OFF / NB OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9596	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2525	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3451	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3451	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3451 / 2324 = 1.48$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: DALE MABRY NB OFF / DALE ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8403	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2211	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3022	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3022	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
$V/c \text{ Ratio} = 3,022 / 2,324 = 1.30$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: DALE MABRY ON / HIMES ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9815	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2583	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3530	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3530	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/c Ratio = $3,530/2,324 = 1.52$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: HIMES ON / ARMENIA OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10478	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2757	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3768	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3768	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3768/2324 = 1.62$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: ARMENIA OFF / HOWARD ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9210	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2424	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3312	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3312	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

V/C Ratio = $3,312/2,324 = 1.43$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: HOWARD ON / ASHLEY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10907	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2870	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3923	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, flw	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3923	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3923/2324 = 1.69$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: EAST OF ASHLEY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8786	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2312	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3160	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3160	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
VIC Ratio = $3,160 / 2,324 = 1.36$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: EAST OF ASHLEY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8786	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2312	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3160	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, flW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3160	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3,160/2,336 = 1.35$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: ASHLEY ON / HOWARD OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10907	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2870	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3923	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3923	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3,923 / 2,336 = 1.68$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: HOWARD OFF / ARMENIA ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9210	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2424	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3312	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSI	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3312	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
v/c Ratio = $3,312 / 2,336 = 1.42$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: ARMENIA ON / HIMES OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10478	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2757	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3768	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3768	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
$V/C \text{ Ratio} = 3768/2336 = 1.61$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: HIMES OFF / DALE MABRY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9815	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2583	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3530	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3530	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3,530/2,336 = 1.51$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: NB DALE OFF / SB DALE OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8595	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2262	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3091	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3091	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/c Ratio = $3091/2336 = 1.32$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SB DALE MABRY OFF / DALE ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8403	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2211	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3022	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3022	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
$V/C \text{ Ratio} = 3,022 / 2,336 = 1.29$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: DALE MABRY ON / LOIS OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10067	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2649	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3621	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3621	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3,621 / 2,336 = 1.55$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: LOIS OFF / LOIS ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9091	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2392	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3270	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3270	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 3270/2336 = 1.40$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: LOIS ON / WEST SHORE OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10312	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2714	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3709	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3709	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/c Ratio = $3709/2,336 = 1.59$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: WEST SHORE OFF / SR 60 OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8691	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2287	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3126	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3126	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	3	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3126/2336 = 1.34$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SR 60 OFF / SR 60 ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	4205	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1107	v
Number of Lanes, N	2	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2268	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	2	
Number of Lanes Adjustment, fN	4.5	mph
Adjusted Free-Flow Speed	62.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2268	pcphpl
Adjusted Free-Flow Speed, FFS	62.1	mph
Average Passenger-Car Speed, S	53.1	mph
Number of Lanes, N	2	
Density, D	42.7	pc/mi/ln
Level of Service, LOS	E	

$$v/c \text{ Ratio} = 2,268 / 2,321 = 0.98$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SR 60 ON / KENNEDY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	6236	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1641	v
Number of Lanes, N	2	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	3364	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	2	
Number of Lanes Adjustment, fN	4.5	mph
Adjusted Free-Flow Speed	62.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3364	pcphpl
Adjusted Free-Flow Speed, FFS	62.1	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	2	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$V/c \text{ Ratio} = 3,364 / 2,321 = 1.45$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: WEST OF KENNEDY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 NO-BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	7842	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2064	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fhv	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2115	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, flw	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, flc	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fid	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fn	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2115	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	59.8	mph
Number of Lanes, N	4	
Density, D	35.4	pc/mi/ln
Level of Service, LOS	E	

$V/C \text{ Ratio} = 2,115 / 2,351 = 0.90$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: WEST OF KENNEDY OFF-RAMP
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8555	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2251	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2308	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2308	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	53.2	mph
Number of Lanes, N	4	
Density, D	43.4	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2308/2339 = 0.99$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: KENNEDY OFF TO SR 60 ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	5106	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1344	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	1836	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	62.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	1836	pcphpl
Adjusted Free-Flow Speed, FFS	62.4	mph
Average Passenger-Car Speed, S	60.7	mph
Number of Lanes, N	3	
Density, D	30.2	pc/mi/ln
Level of Service, LOS	D	

$$V/c \text{ Ratio} = 1,836/2,324 = 0.79$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: SR 60 ON TO LOIS OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10013	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2635	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fhv	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2701	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2701	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	29.9	mph
Number of Lanes, N	4	
Density, D	90.3	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2701/2339 = 1.15$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: LOIS OFF TO WEST SHORE ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8936	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2352	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2410	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2410	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	49.0	mph
Number of Lanes, N	4	
Density, D	49.2	pc/mi/ln
Level of Service, LOS	F	

$$V/c \text{ Ratio} = 2410/2339 = 1.03$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: WESTSHORE ON TO DALE MABRY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10734	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2825	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2895	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2895	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	4	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/c \text{ Ratio} = 2,895/2,339 = 1.24$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: DALE MABRY OFF / LOIS ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9040	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2379	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2438	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2438	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	47.6	mph
Number of Lanes, N	4	
Density, D	51.2	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,438 / 2,339 = 1.04$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: LOIS ON / DALE MABRY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10167	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2676	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2742	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2742	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	26.2	mph
Number of Lanes, N	4	
Density, D	104.7	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,742 / 2,339 = 1.17$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: DALE MABRY ON / HIMES ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 7/26/00

VOLUME

Volume, V	11641	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	3063	v
Number of Lanes, N	5	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2512	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	5	
Number of Lanes Adjustment, fN	0.0	mph
Adjusted Free-Flow Speed	65.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2512	pcphpl
Adjusted Free-Flow Speed, FFS	65.4	mph
Average Passenger-Car Speed, S	43.7	mph
Number of Lanes, N	5	
Density, D	57.5	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,512 / 2,354 = 1.07$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: HIMES ON / ARMENIA OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	12667	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	3333	v
Number of Lanes, N	5	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fhv	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2733	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	5	
Number of Lanes Adjustment, fN	0.0	mph
Adjusted Free-Flow Speed	65.4	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2733	pcphpl
Adjusted Free-Flow Speed, FFS	65.4	mph
Average Passenger-Car Speed, S	24.9	mph
Number of Lanes, N	5	
Density, D	109.6	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,733 / 2,354 = 1.16$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: ARMENIA OFF / HOWARD ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10896	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2867	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2939	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2939	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	4	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/c Ratio = 2,939/2,339 = 1.26$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: HOWARD ON / ASHLEY/SCOTT OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 7/26/00

VOLUME

Volume, V	12251	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	3224	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3305	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3305	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	4	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $3,305/2,339 = 1.41$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: EB I-275
From/To: EAST OF SCOTT OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9465	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2491	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2553	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.42	interchange/mi
Interchange Density Adjustment, fID	4.6	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	63.9	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2553	pcphpl
Adjusted Free-Flow Speed, FFS	63.9	mph
Average Passenger-Car Speed, S	41.1	mph
Number of Lanes, N	4	
Density, D	62.2	pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $2,553/2,339 = 1.09$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: EAST OF ASHLEY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9465	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2491	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fhv	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2553	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2553	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	40.6	mph
Number of Lanes, N	4	
Density, D	62.9	pc/mi/ln
Level of Service, LOS	F	

$$V/c \text{ Ratio} = 2,553/2,351 = 1.09$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: ASHLEY ON / HOWARD OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	12251	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	3224	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	3305	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	3305	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	4	
Density, D		pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 3,305 / 2,351 = 1.41$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: HOWARD OFF / ARMENIA ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10896	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2867	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fhv	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2939	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, flw	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, flc	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fid	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fn	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2939	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S		mph
Number of Lanes, N	4	
Density, D		pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $2,939/2,351 = 1.25$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: ARMENIA ON / HIMES OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	12667	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	3333	v
Number of Lanes, N	5	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2733	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	5	
Number of Lanes Adjustment, fN	0.0	mph
Adjusted Free-Flow Speed	66.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2733	pcphpl
Adjusted Free-Flow Speed, FFS	66.6	mph
Average Passenger-Car Speed, S	26.1	mph
Number of Lanes, N	5	
Density, D	104.8	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,733/2,366 = 1.16$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: HIMES OFF / DALE MABRY OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 7/26/00

VOLUME

Volume, V	11641	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	3063	v
Number of Lanes, N	5	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2512	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	5	
Number of Lanes Adjustment, fN	0.0	mph
Adjusted Free-Flow Speed	66.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2512	pcphpl
Adjusted Free-Flow Speed, FFS	66.6	mph
Average Passenger-Car Speed, S	44.6	mph
Number of Lanes, N	5	
Density, D	56.3	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,512 / 2,366 = 1.06$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: DALE MABRY OFF / CYPRESS OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10167	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2676	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2742	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2742	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	65.1	mph
Number of Lanes, N	4	
Density, D	42.1	pc/mi/ln
Level of Service, LOS	EF	

$$V/C \text{ Ratio} = 2,742 / 2,351 = 1.17$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: CYPRESS OFF / DALE MABRY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	9040	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2379	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2438	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2438	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	47.9	mph
Number of Lanes, N	4	
Density, D	50.9	pc/mi/ln
Level of Service, LOS	F	

$V/c \text{ Ratio} = 2,438/2,351 = 1.04$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: DALE MABRY ON / WEST SHORE OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 Build
Date Performed: 4/17/00

VOLUME

Volume, V	10734	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2825	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2895	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2895	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	4.4	mph
Number of Lanes, N	4	
Density, D	663.0	pc/mi/ln
Level of Service, LOS	F	
V/C Ratio = $2895/2351 = 1.23$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: WEST SHORE OFF / LOIS ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8936	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2352	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2410	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2410	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	49.4	mph
Number of Lanes, N	4	
Density, D	48.8	pc/mi/ln
Level of Service, LOS	F	
$V/C \text{ Ratio} = 2,410/2,351 = 1.03$		

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: LOIS ON / SR 60 OFF
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	10013	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2635	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2701	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2701	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	27.9	mph
Number of Lanes, N	4	
Density, D	96.7	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,701 / 2,351 = 1.15$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SR 60 OFF / SR 60 ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	5106	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1344	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fhv	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	1836	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, flw	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, flc	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fid	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fn	3.0	mph
Adjusted Free-Flow Speed	63.6	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	1836	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S	62.0	mph
Number of Lanes, N	3	
Density, D	29.6	pc/mi/ln
Level of Service, LOS	D	

$$V/c \text{ Ratio} = 1,836/2,336 = 0.79$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: SR 60 ON / KENNEDY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	7140	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	1879	v
Number of Lanes, N	3	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fp	1.00	
Adjusted Flow Rate, vp	2568	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	3	
Number of Lanes Adjustment, fN	3.0	mph
Adjusted Free-Flow Speed	63.6	mph

Urban Freeway

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2568	pcphpl
Adjusted Free-Flow Speed, FFS	63.6	mph
Average Passenger-Car Speed, S	40.3	mph
Number of Lanes, N	3	
Density, D	63.7	pc/mi/ln
Level of Service, LOS	F	

$$V/C \text{ Ratio} = 2,568 / 2,336 = 1.10$$

URS
7650 WEST COURTNEY CAMPBELL CSWY
TAMPA, FLORIDA

Phone: (813) 286-1711
E-mail:

Fax:

OPERATIONAL ANALYSIS

Highway/Dir. Travel: WB I-275
From/To: WEST OF KENNEDY ON
Agency or Company: URS
Analyst: DEA
Analysis Time Period: DESIGN HOUR
Jurisdiction:
Analysis Year: 2025 BUILD
Date Performed: 4/17/00

VOLUME

Volume, V	8555	vph
Peak-Hour Factor, PHF	0.95	
Peak 15-min Volume, v15	2251	v
Number of Lanes, N	4	
Terrain Type	Level	
Grade	0.00	%
Segment Length	0.00	mi
Trucks and Buses	5	%
Trucks and Buses PCE, ET	1.5	
Recreational Vehicles	0	%
Recreational Vehicle PCE, ER	1.2	
Heavy Vehicle Adjustment, fHV	0.98	
Driver Population Adjustment, fP	1.00	
Adjusted Flow Rate, vp	2308	pcphpl

FREE-FLOW SPEED

Free-Flow Speed:	Ideal	
FFS or FFSi	70.0	mph
Lane Width	12.0	ft
Lane Width Adjustment, fLW	0.0	mph
Right-Shoulder Lateral Clearance	6.0	ft
Lateral Clearance Adjustment, fLC	0.0	mph
Interchange Density	1.19	interchange/mi
Interchange Density Adjustment, fID	3.4	mph
Number of Lanes, N	4	
Number of Lanes Adjustment, fN	1.5	mph
Adjusted Free-Flow Speed	65.1	mph
	Urban Freeway	

Adjusted free-flow speed cannot be less than 55 mph.

RESULTS

Adjusted Flow Rate, vp	2308	pcphpl
Adjusted Free-Flow Speed, FFS	65.1	mph
Average Passenger-Car Speed, S	54.0	mph
Number of Lanes, N	4	
Density, D	42.7	pc/mi/ln
Level of Service, LOS	E	

$$V/C \text{ Ratio} = 2,308 / 2,351 = 0.98$$